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THE WELDING ENGINEER
with which is combined The Acetylene Journal

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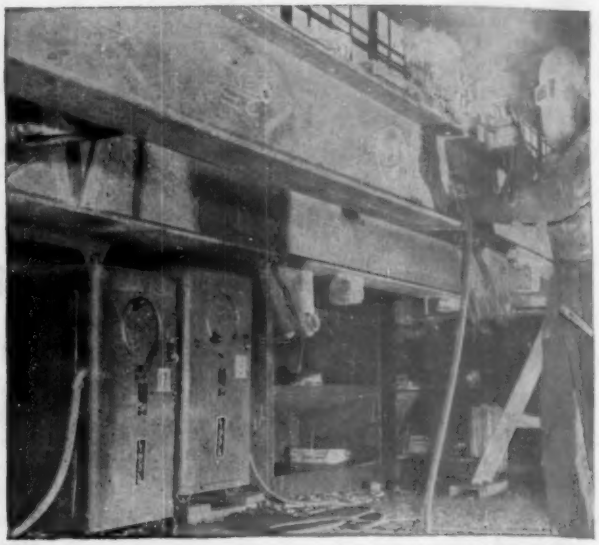
IN OUR 33d YEAR OF SERVICE TO THE WELDING INDUSTRY.

Suggestions for cutting costs with ARC WELDING

With D. C. Welding . . . The Lincoln "Shield-Arc" Welder enables you to select the right TYPE of arc and the right arc INTENSITY to match every thickness of metal and every welding condition . . . easily, quickly. Simplifies operation because control is self-indicating and continuous. Full details in Bul. 459.



With A. C. Welding . . . The Lincoln "Fleetwelder" simplifies A.C. welding for all kinds of jobs because it has the exclusive "Arc Booster" which makes arc striking as easy as lighting a match. "Fleetwelder's" broad welding range handles all work from thin sheets to heavy plates. Full details in Bul. 366.

Boost Speed with "Fleet-Welding" Technique. Where possible, position work for downhand welding. Fit up joint carefully. Use large "Fleetweld" Electrode, ample current and "Fleet-Welding" procedure. Speed increases of 25% to 75% are common with this technique. Full details in handy pocket manual, Bul. 444. Free on request.

Broaden Your Welding Knowledge. The Lincoln library of arc welding includes the world's leading books on all phases of the subject. Also, *color movies* on application, design and production are available for showing to everyone interested in solving problems with arc welding. Write for bulletins on books and movies.

The above is published by LINCOLN ELECTRIC in the interests of progress. For information, write The Lincoln Electric Company, Dept. 97, Cleveland 1, Ohio.

Advertisement

Facts & Figures . . . 1947

THE WELDING ENGINEER's 1947 statistical review of the welding industry indicates that sales volume is again on the upturn. Arc-welding electrodes and welding gases show remarkable gains

THE sales volume of the welding industry is again on the upturn. Despite continued shortages in the field of basic materials, the demand for welding equipment, supplies and gases increased in 1947 to bring the total for the industry to $306,974,378. More than half of this amount was spent for welding gases whose production approached the production of the war-time years of 1942 and 1945.

A total of over 13¾ billion cubic feet of oxygen and 4¼ billion cubic feet of acetylene were produced last year. These two welding gases had a total value of $183,381,500 of the $205,964,671 gas-welding industry. The sale of gas-welding apparatus in 1947 was only slightly higher than that of 1946, while the sale of gas-welding rods and accessories jumped 60%.

In the arc-welding industry, it was found that the value of welding machines and arc-welding accessories both jumped, while the value of welding electrodes slumped about 10%. The overall total for the arc-welding industry was slightly below that of 1946. Electrode production, despite its lower total value, was up 20,000,000 pounds to 360,098,430 pounds.

While the total value of resistance-welding equipment produced in 1947 was down about 10% from 1946, the total value of $26,843,271 exceeded that of any year in the history of resistance welding with the exception of 1946. Had it not been for material shortages, the industry would undoubtedly have exceeded the 1946 figure, but as it was, it ended the year with a backlog which equalled the entire year's production for 1941.

The welding sales index which takes the years 1935 to 1939 as equal to 100 found 1947 at 448. The dollar sales per ton of steel ingot figure for 1947 was $3.61 as compared to $3.51 for 1946 despite an increase in steel ingot production of over 18 million tons for the year. The 1947 total for steel ingot production in the United States was 84,783,981 tons. From this quantity of ingots there were produced 28,492,386 tons of plates, shapes and sheets, much of which was joined by welding.

* * *

THE WELDING ENGINEER wishes to thank the individuals, companies and other organizations without whose assistance it would have been impossible to compile the information presented in "Facts and Figures." In particular, we are indebted to the Bureau of Census, American Iron and Steel Institute, Resistance Welder Manufacturers' Association, Compressed Gas Manufacturers Association, National Electrical Manufacturers Association and many individual manufacturers in the welding industry whose names must remain secret because of the confidential information supplied to us.

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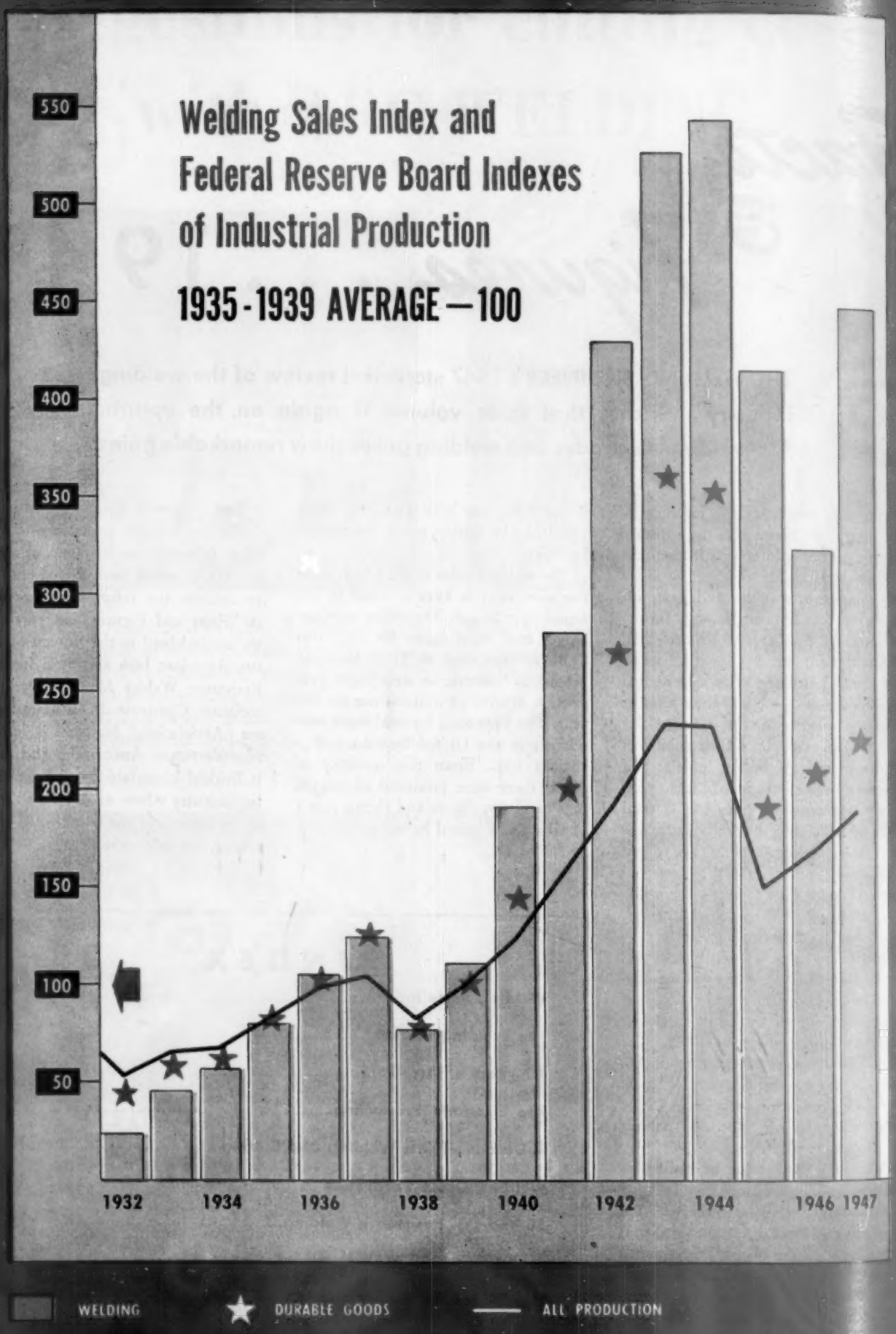
Welding Sales Index and
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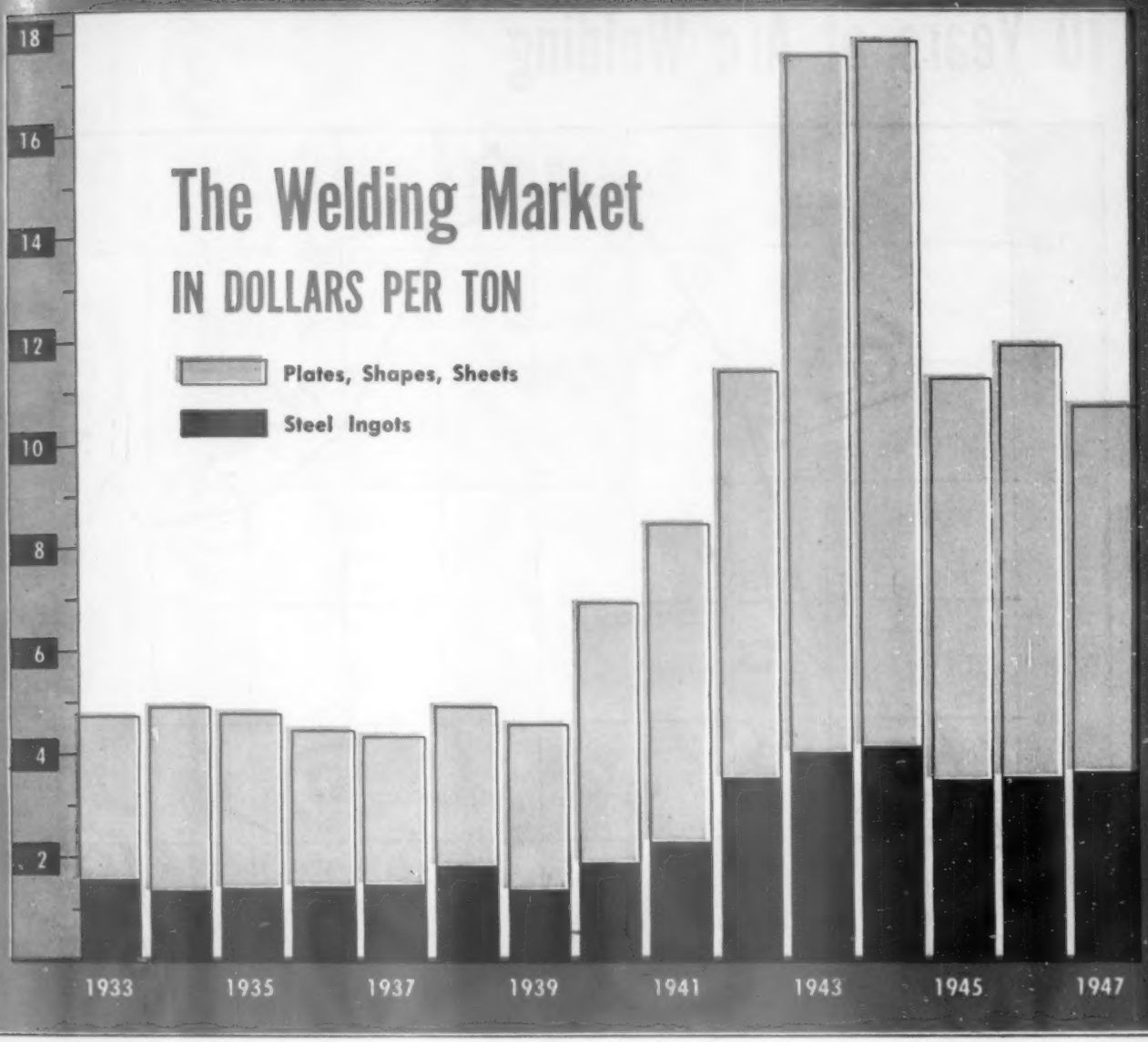
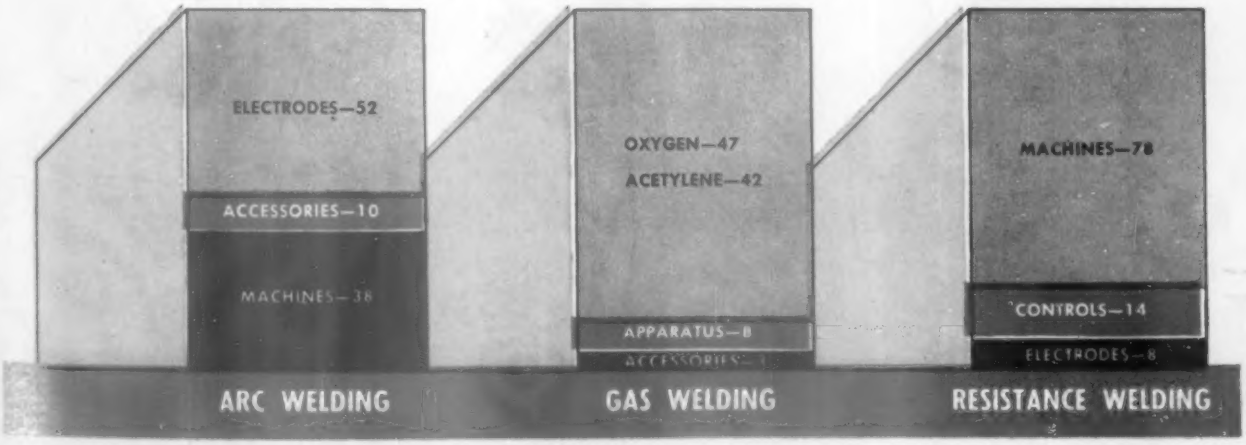
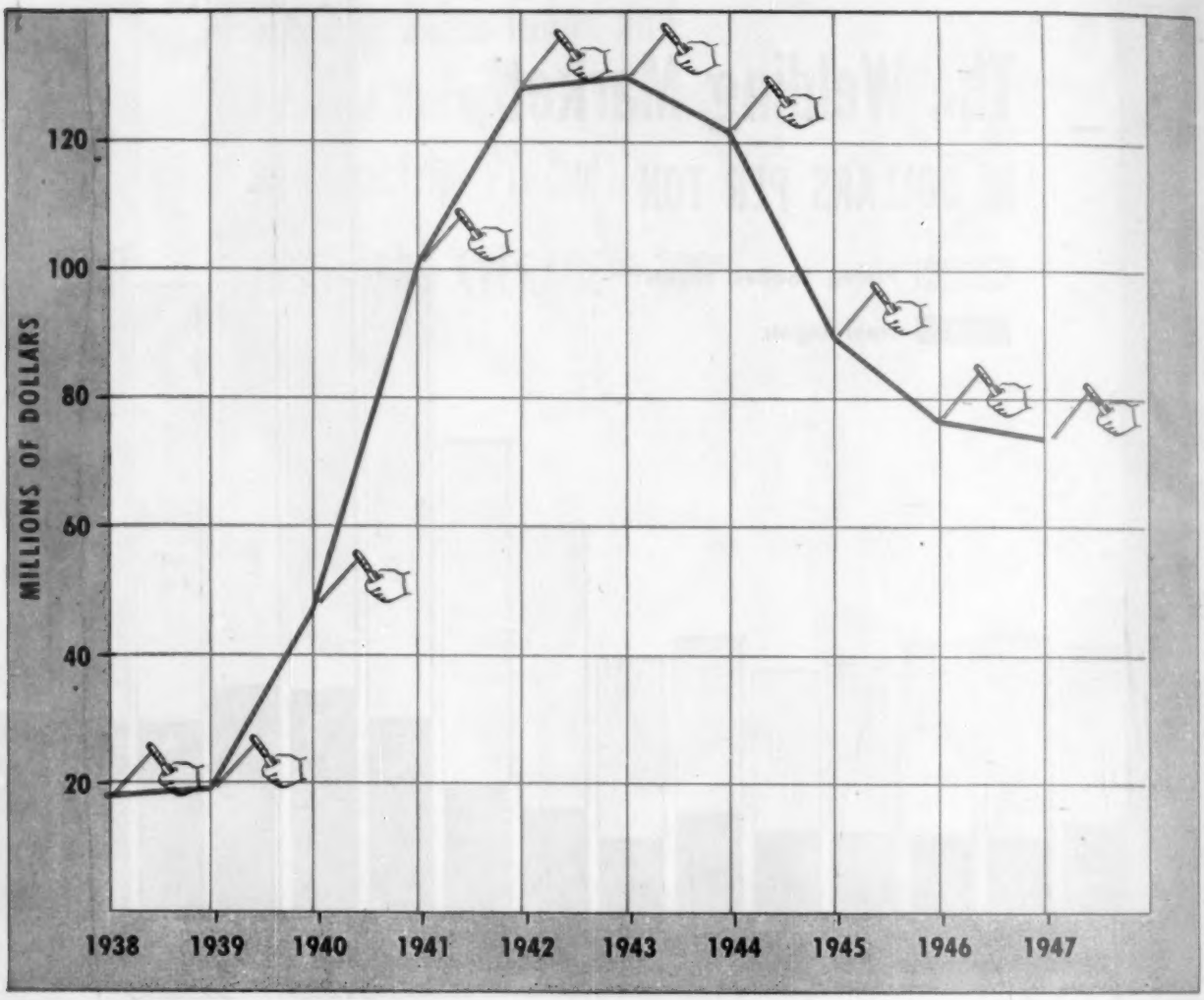
1935-1939 AVERAGE—100
550
500
450
400
350
300
250
200
150
100
50
1932
1934
1936
1938
1940
1942
1944
1946
1947
WELDING
DURABLE GOODS
ALL PRODUCTION



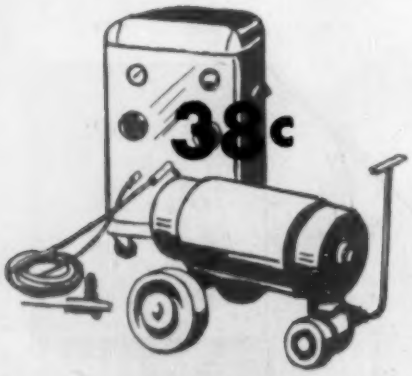
YOUR WELDING DOLLAR... how it was divided—



10 Years of Arc Welding



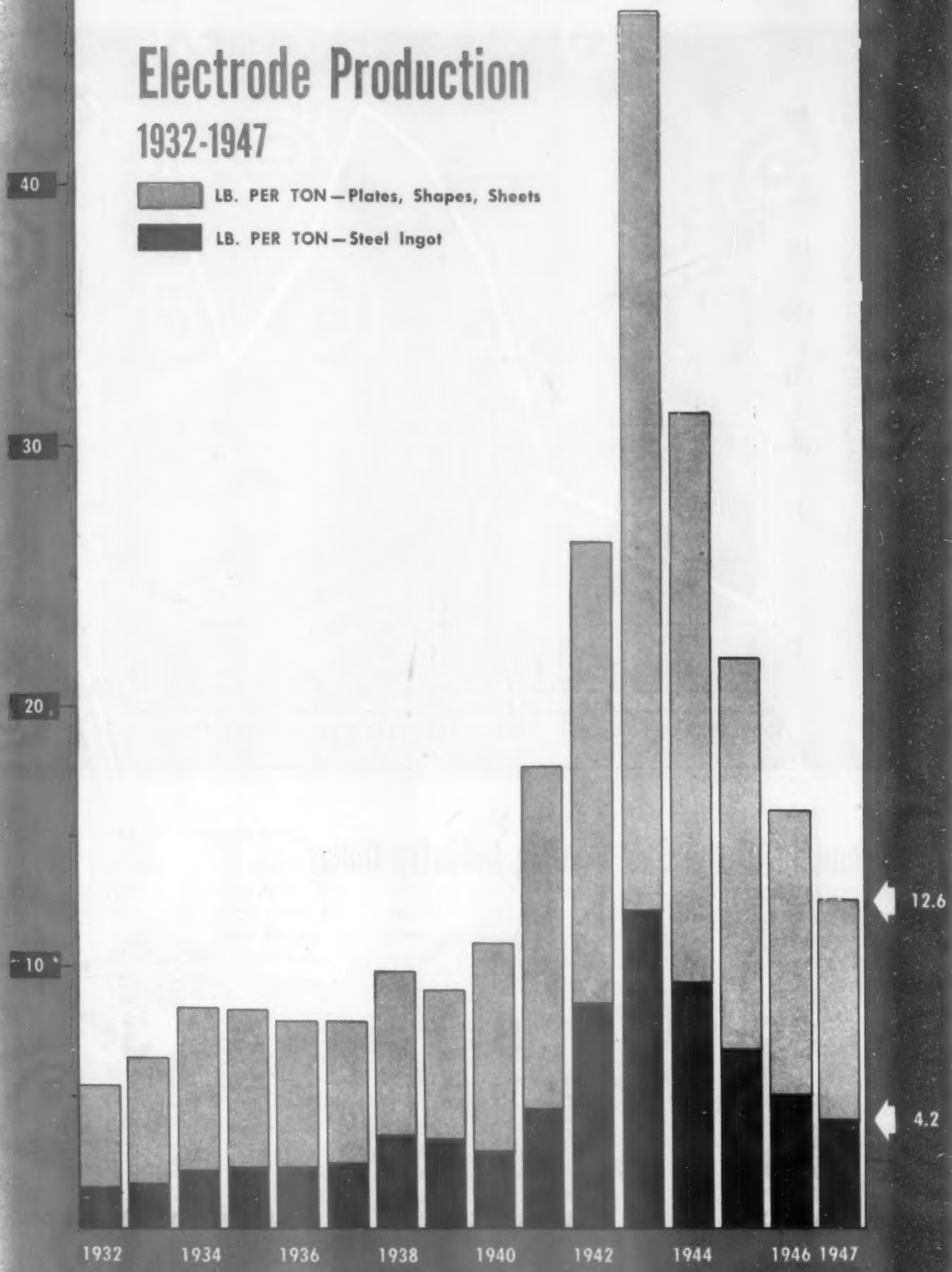
The 1947 Arc Welding Dollar was divided



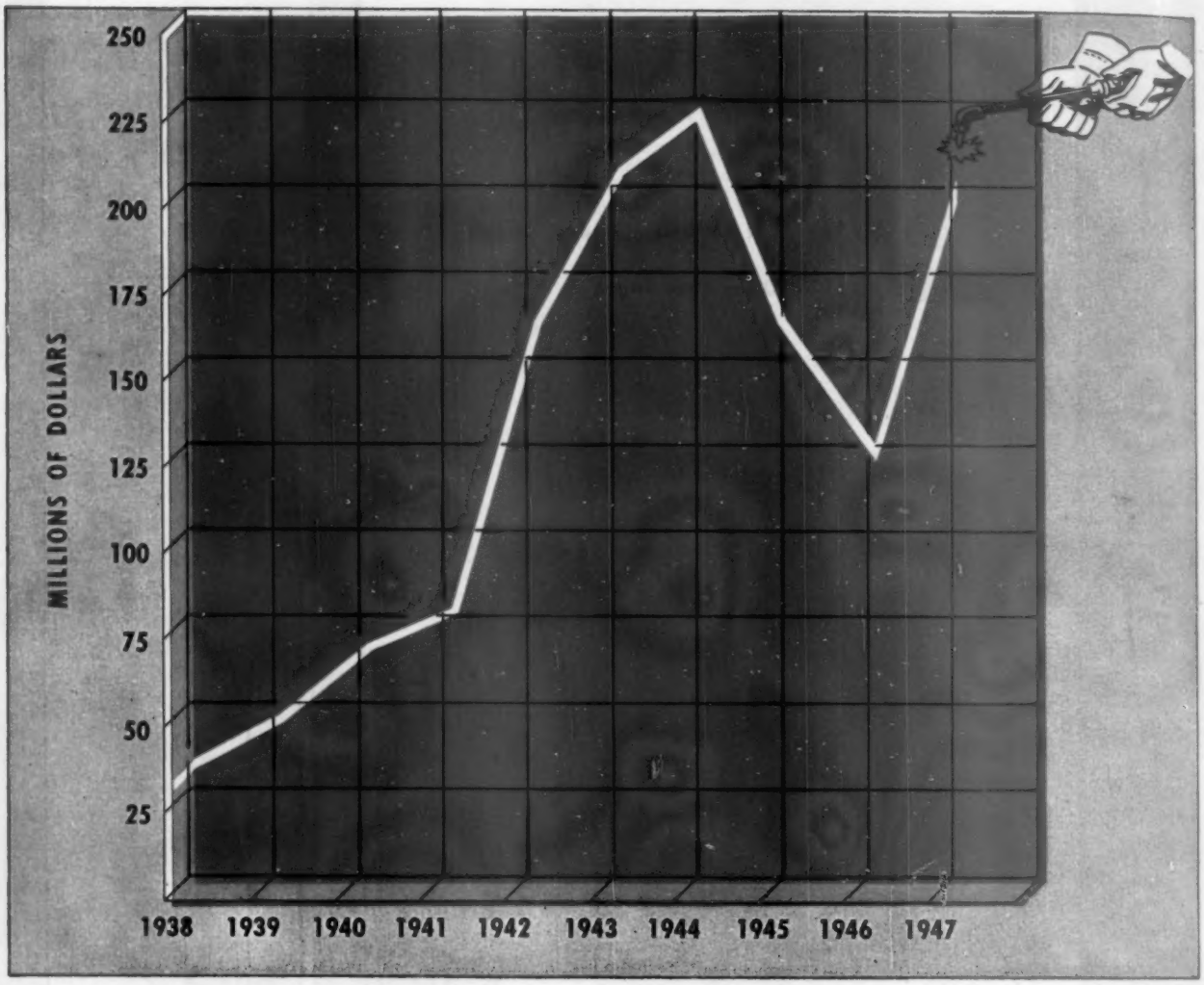
MACHINES

ELECTRODES

ACCESSORIES

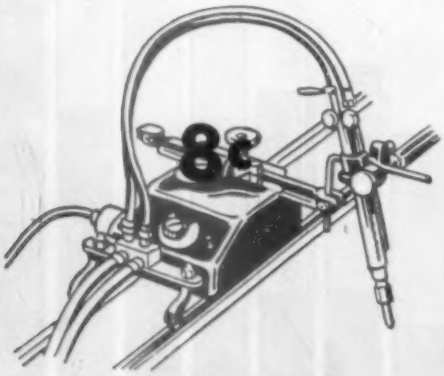

Electrode Production
1932-1947
LB. PER TON—Plates, Shapes, Sheets
LB. PER TON—Steel Ingot
POUNDS OF ELECTRODES PER TON
40
30
20
10
12.6
4.2
1932
1934
1936
1938
1940
1942
1944
1946
1947

A Decade of Gas Welding and Cutting



Spending of the Gas Welding Industry Dollar

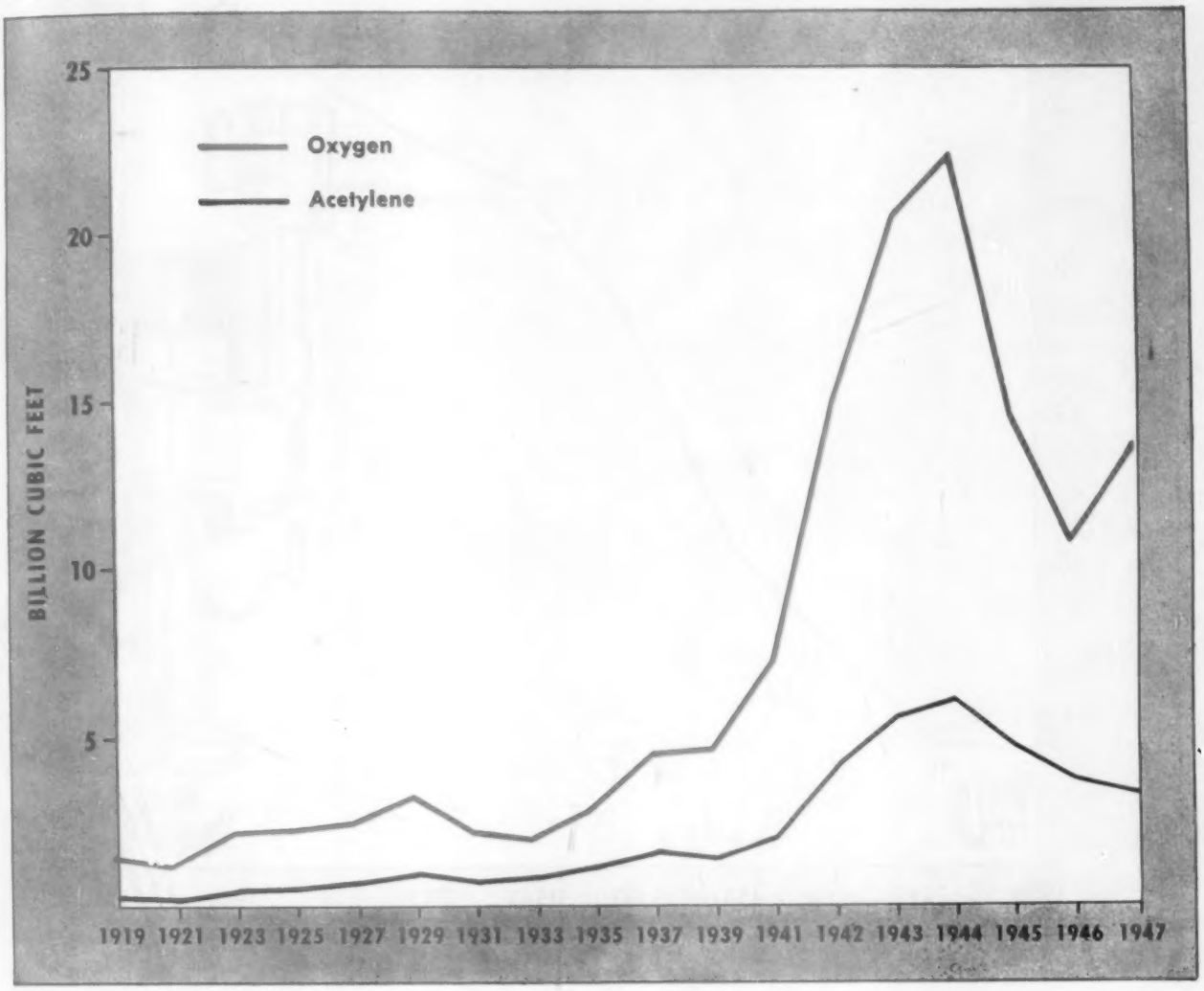
GASES



APPARATUS

ACCESSORIES & RODS

Welding Gases Production—going up again



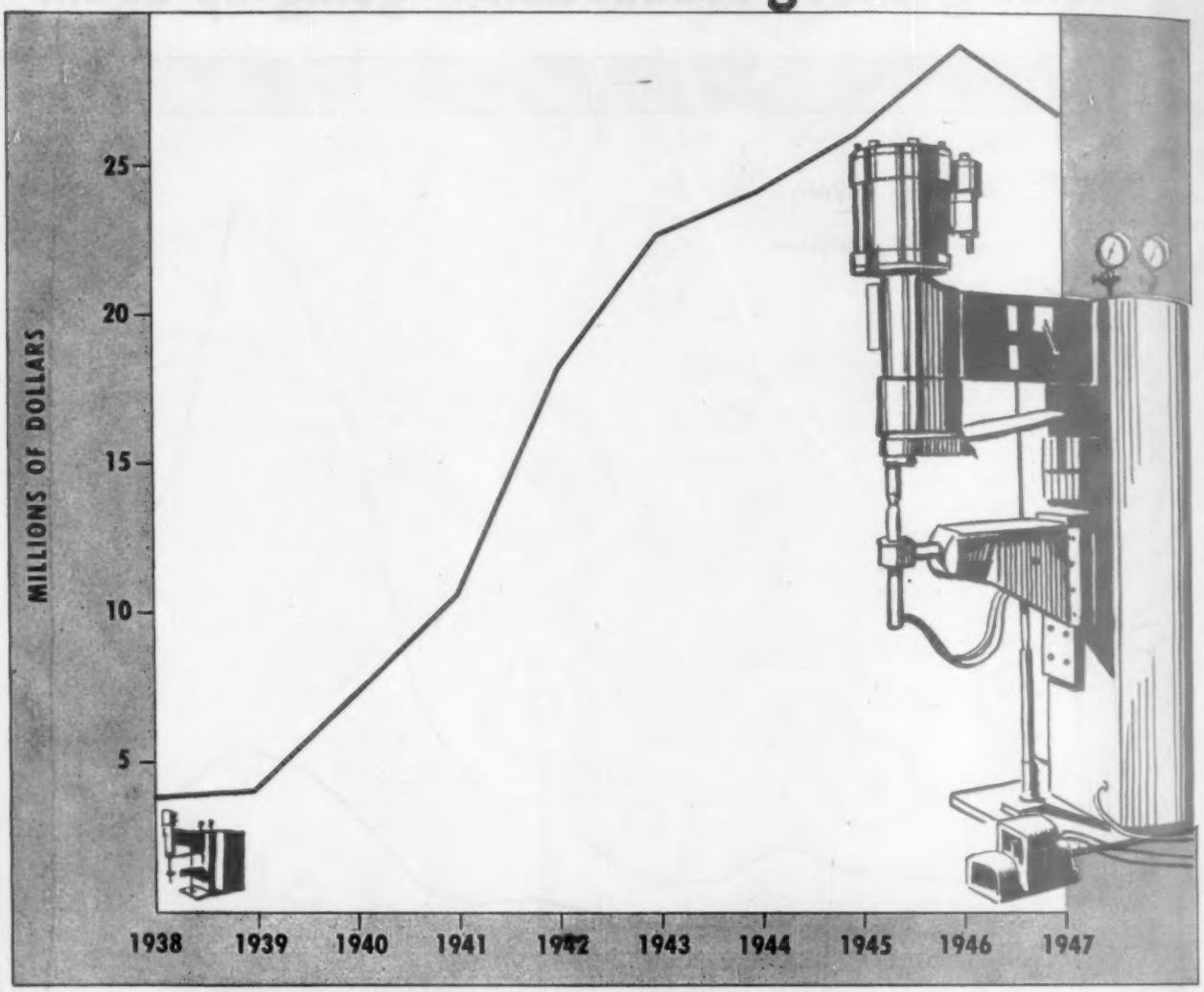
OXYGEN PRODUCTION

1919	1,173,414,000	1931	2,050,377,000	1942	14,987,643,000
1921	1,062,135,000	1933	1,821,880,000	1943	20,483,830,000
1923	2,057,526,000	1935	2,683,859,000	1944	22,316,928,000
1925	2,073,826,000	1937	4,441,391,000	1945	14,530,939,000
1927	2,359,896,000	1939	4,561,968,000	1946	10,838,259,000
1929	3,140,095,000	1941	7,181,479,000	1947	13,786,800,000

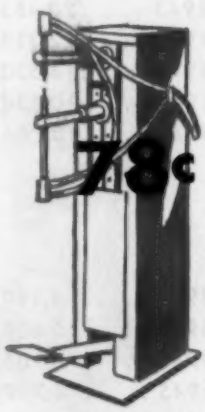
ACETYLENE PRODUCTION

1919	311,390,000	1931	742,898,000	1942	4,199,863,000
1921	291,630,000	1933	754,089,000	1943	5,603,897,000
1923	522,349,000	1935	1,143,199,000	1944	6,105,918,000
1925	525,746,000	1937	1,511,445,000	1945	4,799,464,000
1927	682,481,000	1939	1,274,164,000	1946	3,649,873,000
1929	969,534,000	1941	2,030,520,000	1947	4,286,700,000

10 Years of Resistance Welding



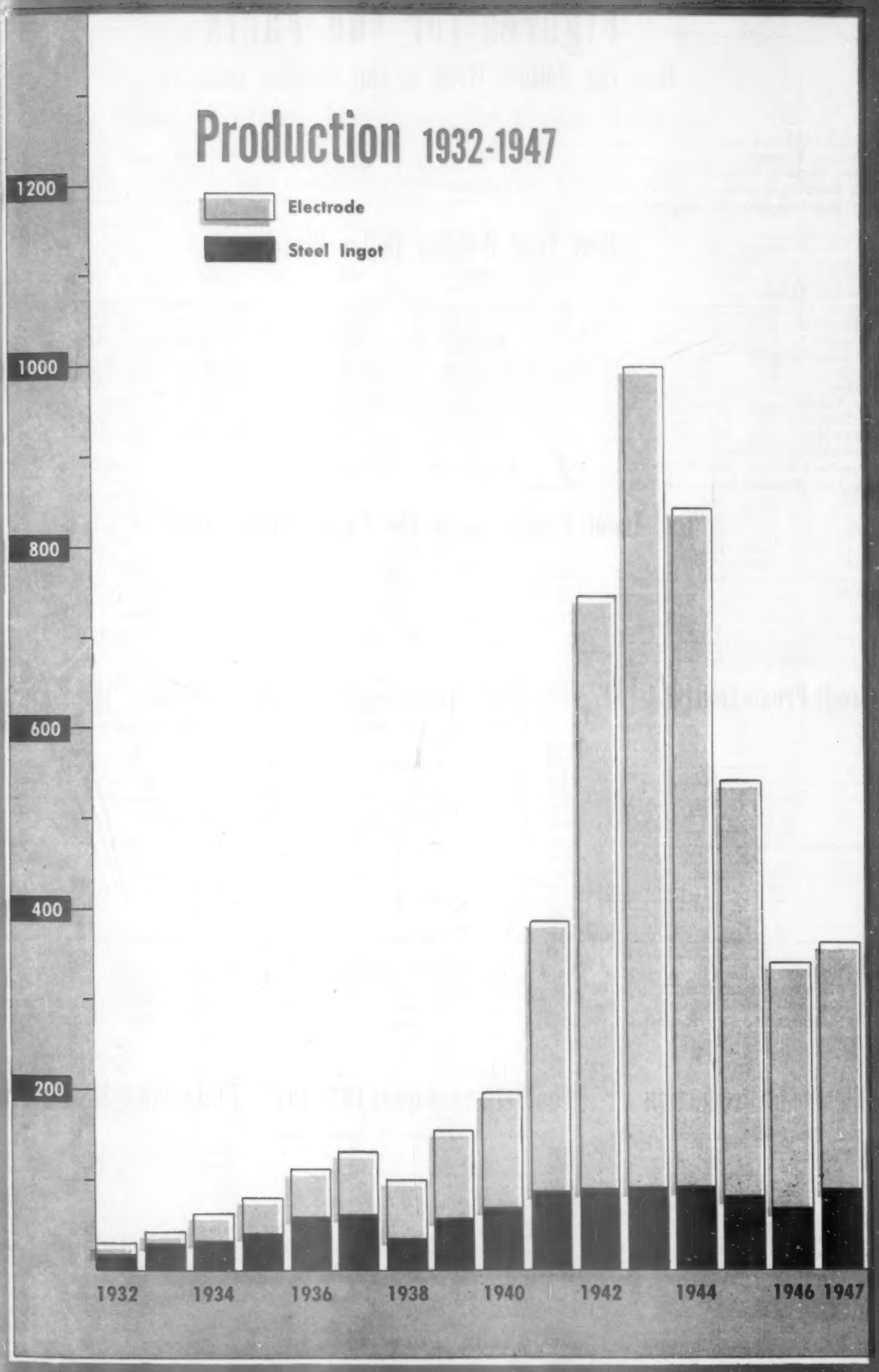
The Resistance Welding Dollar was divided in 1947



MACHINES

ELECTRODES

CONTROLS


Production 1932-1947
Electrode
Steel Ingot
HUNDRED MILLION POUND UNITS
1200
1000
800
600
400
200
MILLION TONS
1932
1934
1936
1938
1940
1942
1944
1946
1947

Figures for the Facts

How the Dollars Went in the Welding Industry

	1943	1944	1945	1946	1947
Gas Welding Industry and Cutting	$207,884,714	$225,479,488	$162,078,761	$127,775,022	$205,964,621
Arc Welding Industry	130,131,956	121,904,397	89,874,602	76,916,093	74,166,436
Resistance Welding Industry	22,641,997	24,161,553	26,346,755	29,102,830	26,843,271
Welding Industry Totals	$360,658,667	$371,545,428	$278,300,118	$223,794,265	$306,974,378

Source: THE WELDING ENGINEER Estimates.

How Your Welding Dollar Was Spent

	1943	1944	1945	1946	1947
Arc Welding Industry					
Machines	$30,624,381	$34,208,290	$28,781,670	$27,357,630	$28,340,419
Arc Electrodes	88,581,541	77,822,486	53,949,012	42,720,842	38,838,649
Accessories	10,926,034	9,873,621	7,143,920	6,837,921	6,987,368
Gas Welding Industry					
Oxygen	112,661,065	122,739,804	79,920,164	60,610,424	96,507,600
Acetylene	72,850,661	79,386,934	62,393,032	47,448,356	86,873,900
Gas Totals	185,511,726	202,126,738	142,313,196	108,058,780	183,381,500
Apparatus	16,994,384	17,654,321	15,436,287	16,023,489	16,833,050
Welding Rod	5,378,604	5,698,429	4,329,278	3,692,753	5,750,121
Resistance Welding Industry					
Apparatus, Controls and Electrodes	$22,641,997	$24,161,553	$26,346,755	$29,102,830	$26,843,271

Source: THE WELDING ENGINEER Industry Estimates.

Steel Ingot Production in the United States 1932-47

In tons

Year	1932	1933	1934	1935	1936	1937	1938	1939
Production	15,123,207	25,724,196	29,181,329	38,182,986	53,449,085	56,635,899	31,751,983	52,797,783
Year	**1940**	**1941**	**1942**	**1943**	**1944**	**1945**	**1946**	**1947**
Production	66,981,662	82,927,557	86,029,921	88,836,366	89,641,575	79,701,624	66,602,706	84,783,981

Source: American Iron & Steel Institute.

Electrode Production 1934-1947

	Pounds
1934	57,000,000
1935	77,230,000
1936	110,330,000
1937	128,360,000
1938	97,020,000
1939	152,863,400
1940	198,995,000
1941	386,886,131
1942	745,893,457
1943	1,086,784,300
1944	847,937,972
1945	541,829,046
1946	340,029,320
1947	360,098,430

Sources: 1934-40—National Electrical Manufacturers' Association
1941-on—THE WELDING ENGINEER Industry Estimates

Electrode Production 1934-1947

In Pounds Per Ton of Steel Ingot

1934	2.2 lbs.
1935	2.3 lbs.
1936	2.3 lbs.
1937	2.5 lbs.
1938	3.5 lbs.
1939	3.3 lbs.
1940	2.9 lbs.
1941	4.6 lbs.
1942	8.6 lbs.
1943	12.2 lbs.
1944	9.5 lbs.
1945	6.9 lbs.
1946	5.1 lbs.
1947	4.2 lbs.

Source: THE WELDING ENGINEER Industry Estimates

Welding Wire Electrode

Electrodes and Wire, Pounds

1934	72,100,000
1935	97,750,000
1936	140,300,000
1937	155,310,000
1938	117,395,000
1939	183,436,000
1940	237,780,000
1941	425,574,744
1942	803,755,822
1943	1,133,876,000
1944	890,243,721
1945	589,371,842
1946	370,632,958
1947	388,121,600

Sources: 1933-39—American Iron & Steel Institute
1940-on—THE WELDING ENGINEER Industry Estimates

» «

Electrode Production

Lb. Per Ton-Plates, Shapes, Sheets

1934	8.4
1935	8.3
1936	7.9
1937	7.9
1938	9.9
1939	9.1
1940	10.9
1941	17.7
1942	26.4
1943	46.7
1944	31.3
1945	21.9
1946	16.1
1947	12.6

Source: THE WELDING ENGINEER Industry Estimates

The Welding Market 1934-1947

In Dollars Per Ton of Steel Ingot

1934	1.36
1935	1.38
1936	1.42
1937	1.45
1938	1.83
1939	1.37
1940	1.86
1941	2.30
1942	3.51
1943	4.06
1944	4.14
1945	3.49
1946	3.51
1947	3.64

Source: THE WELDING ENGINEER Industry Estimates

Plate, Shape & Sheet Production

	Tons
1934	6,793,275
1935	9,398,320
1936	13,910,709
1937	16,082,743
1938	9,797,408
1939	16,492,952
1940	18,107,108
1941	23,342,334
1942	27,488,389
1943	23,219,605
1944	23,498,712
1945	24,681,737
1946	21,396,280
1947	28,492,386

Source: THE WELDING ENGINEER Industry Estimates

Flame Cutting Data — Hand and Machine

Table No. 1—Hand Flame Cutting Table for ⅛-In. to 12-In. Thickness For Clean Mild Steel—Not Preheated—Type No. 1 Cutting Only

Thickness of Steel, in.	Diameter of cutting Orifice, in.	Oxygen Pressure, lb. per sq. in.	Cutting Speed, in. per min.**	GAS CONSUMPTIONS* Per Hour: Oxygen, cu. ft.	Per Hour: Acetylene, cu. ft.	Per Linear Foot**: Oxygen, cu. ft.	Per Linear Foot**: Acetylene, cu. ft.
⅛	0.0380-0.0400	15-23	20-30	45- 55	7- 9	0.37- 0.45	0.06-0.07
¼	0.0380-0.0595	11-20	16-26	50- 93	9-11	0.63- 0.72	0.08-0.11
⅜	0.0380-0.0595	17-25	15-24	60-115	10-12	0.80- 0.96	0.10-0.13
½	0.0465-0.0595	20-30	12-22	66-125	10-13	1.10- 1.14	0.12-0.17
¾	0.0465-0.0595	24-35	12-20	117-143	12-15	1.43- 1.95	0.15-0.20
1	0.0465-0.0595	28-40	9-18	130-160	13-16	1.78- 2.89	0.18-0.29
1½	0.0595-0.0810	-40	6-				
2	0.0670-0.0810	22-50	6-13	185-231	16-20	3.55- 6.16	0.31-0.53
3	0.0670-0.0810	33-55	4-10	240-290	19-23	5.80- 12.00	0.46-0.95
4	0.0810-0.0860	42-60	4- 8	293-388	21-26	9.70- 14.64	0.65-1.05
5	0.0810-0.0860	53-70	3.5- 6.4	347-437	24-29	13.66- 19.83	0.91-1.37
6	0.0980-0.0995	45-80	3.0- 5.4	400-567	27-32	21.00- 26.70	1.19-1.80
8	-0.0995	60-77	2.6- 4.2	505-615	31-5-38.5	29.30- 38.84	1.83-2.42
10	-0.0995	75-96	1.9- 3.2	610-750	36.9-45.1	46.90- 64.20	2.57-3.84
12***	.1200	69-86	1.4- 2.6	720-880	42.3-51.7	67.70-103.00	3.98-6.05

*As the pressure of acetylene for the preheating flames is more a function of blowpipe or torch design than of the thickness of the part being cut, the pressure data, therefore, have been omitted from this table. For acetylene pressure data, see cutting apparatus manufacturers' charts.

**Lowest speeds and highest gas consumptions per linear foot are for inexperienced operators, short cuts, dirty or poor material. Highest speeds and lowest gas consumptions per linear foot are for experienced operators long cuts, clean and good material.

***Beyond 12-in. thickness, the critical data of manual cutting practices are greatly affected by the condition of the metal and the skill of the operator, resulting in wide ranges of data. In view of this, the table has been terminated at the 12-in. thickness.

The reader is referred to Table No. 2, below, giving data on Machine Cutting wherein the thickness range has been extended to 20 in.

Table No. 2—Machine Flame Cutting Table for ⅛-In. to 20-In. Thickness For Mild Steel—Not Preheated—Type No. 1 Cutting Only*

Thickness of Steel, in.	Diameter of cutting Orifice, in.	Oxygen Pressure, lb. per sq. in.	Cutting Speed, in. per min.**	GAS CONSUMPTIONS* Per Hour: Oxygen, cu. ft.	Per Hour: Acetylene, cu. ft.	Per Linear Foot**: Oxygen, cu. ft.	Per Linear Foot**: Acetylene, cu. ft.
⅛	0.0250-0.0400	15- 23	22-32	40- 55	7- 9	0.34- 0.36	0.05- 0.06
¼	0.0310-0.0595	11- 35	20-28	45- 93	8-11	0.45- 0.66	0.07- 0.08
⅜	0.0310-0.0595	17- 40	19-26	82- 115	9-12	0.86- 0.89	0.09- 0.09
½	0.0310-0.0595	20- 55	17-24	105- 125	10-13	1.04- 1.24	0.11- 0.12
¾	0.0380-0.0595	24- 50	15-22	117- 159	12-15	1.45- 1.56	0.14- 0.16
1	0.0465-0.0595	28- 55	14-19	130- 174	13-16	1.83- 1.86	0.17- 0.19
1½	0.0670-0.0810	- 55	12-15	- 240	14-18	3.20-	0.23- 0.24
2	0.0670-0.0810	22- 60	10-14	185- 260	16-20	3.70- 3.72	0.29- 0.32
3	0.0810-0.0860	33- 50	8-11	240- 332	18-23	6.00- 6.04	0.42- 0.45
4	0.0810-0.0860	42- 60	6.5- 9	293- 384	21-26	8.53- 9.02	0.58- 0.65
5	0.0810-0.0860	53- 65	5.5- 7.5	347- 411	23-29	10.97- 12.62	0.77- 0.84
6	0.0980-0.0995	45- 65	4.5- 6.5	400- 490	26-32	15.10- 17.78	0.98- 1.16
8	0.0980-0.0995	60- 90	3.7- 4.9	505- 625	31-39	25.52- 27.30	1.59- 1.68
10	0.0995-0.1100	75- 90	2.9- 4.0	610- 750	37-45	37.50- 42.10	2.25- 2.55
12	0.0110-0.1200	69-105	2.4- 3.5	720- 880	42-52	49.70- 60.00	2.97- 3.50
14	0.0110-0.1200	-105	2.0- 3.2	830-1045	48-59	65.20- 83.00	3.69- 4.80
16	0.1285-0.1600	-110	1.8- 3.0	935-1360	57-70	90.60-104.00	4.67- 6.33
18	0.1495-0.1600	-120	1.7- 3.0	1045-1680	65-83	112.10-123.00	5.53- 7.65
20	0.1610-0.2000	-135	1.5- 3.0	1155-2050	75-99	136.70-154.00	6.60-10.00

*As the pressure of acetylene for the preheating flames is more a function of blowpipe or torch design than of the thickness of the part being cut, the pressure data, therefore, have been omitted from this table. For acetylene pressure data, see cutting apparatus manufacturers' charts.

**Lowest speeds and highest gas consumptions per linear foot are for inexperienced operators, short cuts, dirty or poor material. Highest speeds and lowest gas consumptions per linear foot are for experienced operators long cuts, clean and good material.

***The apparent inconsistencies which will be noted in some of the columns in the table are due to the fact that there does not exist a straight-line relationship between the elements of pressure, speed and orifice sizes for the range of apparatus data from which this table was devised

(Courtesy International Acetylene Association)

NOW...A 65 VOLT INDUSTRIAL A-C

THE NEW WESTINGHOUSE "65"

- New, LOW VOLTAGE with HIGHEST performance and arc stability
- New, compact HIPERSIL core
- Uniform, continuous current adjustment

Here's good news for welding users . . . and another pioneering accomplishment by Westinghouse in making a-c welding even more economical, efficient and easy to use!

The new Westinghouse "65" Flexarc A-C Welder overcomes the problems of arc instability which formerly limited the use of lower a-c voltages for heavy-duty industrial welding. It now makes available, for the first time, a line of industrial, heavy-duty a-c welders built to operate with an open-circuit secondary voltage of only 65 volts—the lowest as yet achieved for use with all types of a-c electrodes.

The "65" thus provides the most advanced design of industrial a-c welders. Arc stability is assured over the entire operating range of welding current without the addition of troublesome gadgets. This arc stabilization feature not only aids in striking the arc, but is effective in stabilizing the arc during the entire welding cycle.

Kva consumption is reduced by the lower voltage . . . operating costs are cut. Size and weight are reduced by use of Hipersil cores—an exclusive Westinghouse development—with ⅓ greater flux-carrying capacity.

Flexarc "65" Welders are available in 500, 400, 300 and 200-ampere ratings. Mail the handy coupon below for full details. Westinghouse Electric Corporation, Dept. P, Buffalo 5, N. Y.

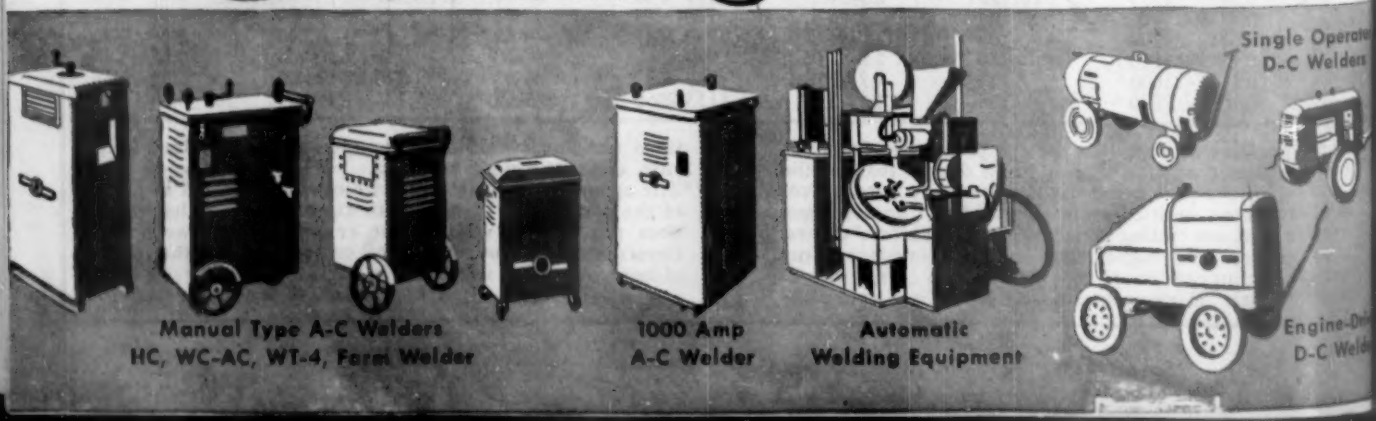
J-70491

FOR SUPERIOR WELDING FLEXARC

WESTINGHOUSE

Westinghouse...EVERYTHING

PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE



A-C WELDER . . .

FLEXARC

The Low Voltage welder with the Stabilized arc

A-C DOES IT FASTER, CHEAPER, BETTER 4 TIMES OUT OF 5!

FASTER: Ease in using heavier electrodes with higher currents, and the ability to make excellent welds in all positions assure higher speeds on all classes of work.

CHEAPER: "No-load" losses approximately 15% of d-c, pays for itself in power savings. 85% to 90% electrical efficiency as compared to 55% to 64% for d-c machines.

BETTER: Westinghouse A-C Welders eliminate magnetic arc blow—reduce spatter loss—permit welding of heavier sections—assure easy arc control and sounder welds.

Investigate Flexarc A-C Welders today—your Westinghouse representative can give you unbiased counsel on *any* metal-joining process.

r Welding ANYTHING!

MAIL THIS COUPON

YES—send me details on the new Westinghouse "65" A-C Welder—also on items checked.

- ☐ Automatic Welding Equipment
- ☐ D-C Welders
- ☐ Engine-Driven Welders
- ☐ HF Stabilizers
- ☐ Brazers
- ☐ Electrodes
- ☐ Resistance Welding Control

Name _____

Company _____

Address _____

_____

THE WELDING ENGINEER'S ENGINEERING DATA SHEET

BRINELL			ROCKWELL			
Dia. in mm., 3000 kg. load 10 mm. ball	Hardness No.	Vickers or Firth Hardness No.	C 150 kg. load 120° Diamond Cone	B 100 kg. load 1/16 in. dia. ball	Scleroscope No.	Tensile Strength 1000 psi.
2.05	898					440
2.10	857					420
2.15	817					401
2.20	780	1150	70		106	384
2.25	745	1050	68		100	368
2.30	712	960	66		95	352
2.35	682	885	64		91	337
2.40	653	820	62		87	324
2.45	627	765	60		84	311
2.50	601	717	58		81	298
2.55	578	675	57		78	287
2.60	555	633	55	120	75	276
2.65	534	598	53	119	72	266
2.70	514	567	52	119	70	256
2.75	495	540	50	117	67	247
2.80	477	515	49	117	65	238
2.85	461	494	47	116	63	229
2.90	444	472	46	115	61	220
2.95	429	454	45	115	59	212
3.00	415	437	44	114	57	204
3.05	401	420	42	113	55	196
3.10	388	404	41	112	54	189
3.15	375	389	40	112	52	182
3.20	363	375	38	110	51	176
3.25	352	363	37	110	49	170
3.30	341	350	36	109	48	165
3.35	331	339	35	109	46	160
3.40	321	327	34	108	45	155
3.45	311	316	33	108	44	150
3.50	302	305	32	107	43	146
3.55	293	296	31	106	42	142
3.60	285	287	30	105	40	138
3.65	277	279	29	104	39	134
3.70	269	270	28	104	38	131
3.75	262	263	26	103	37	128
3.80	255	256	25	102	37	125
3.85	248	248	24	102	36	122
3.90	241	241	23	100	35	119
3.95	235	235	22	99	34	116
4.00	229	229	21	98	33	113
4.05	223	223	20	97	32	110
4.10	217	217	18	96	31	107
4.15	212	212	17	96	31	104
4.20	207	207	16	95	30	101
4.25	202	202	15	94	30	99
4.30	197	197	13	93	29	97
4.35	192	192	12	92	28	95
4.40	187	187	10	91	28	93
4.45	183	183	9	90	27	91
4.50	179	179	8	89	27	89
4.55	174	174	7	88	26	87
4.60	170	170	6	87	26	85
4.65	166	166	4	86	25	83
4.70	163	163	3	85	25	82
4.75	159	159	2	84	24	80
4.80	156	156	1	83	24	78.
4.85	153	153		82	23	76
4.90	149	149		81	23	75
4.95	146	146		80	22	74
5.00	143	143		79	22	72
5.05	140	140		78	21	71
5.10	137	137		77	21	70
5.15	134	134		76	21	68
5.20	131	131		74	20	66
5.25	128	128		73	20	65
5.30	126	126		72		64
5.35	124	124		71		63
5.40	121	121		70		62
5.45	118	118		69		61
5.50	116	116		68		60
5.55	114	114		67		59
5.60	112	112		66		58
5.65	109	109		65		56
5.70	107	107		64		56
5.75	105	105		62		54
5.80	103	103		61		53
5.85	101	101		60		52
5.90	99	99		59		51
5.95	97	97		57		50
6.00	95	95		56		49

*Trade name or Type No. is usually prefixed by company name.
V = vertical, F = flat, OH = overhead, H = horizontal, H-Fillet = horizontal fillet. Airco prefix, 2 Weld-Arc, 3 Perfection prefix, 4 Murex, 5 Rego prefix.

TRADE NAMES* OF ELECTRODES AND COMPARABLE AWS-ASTM DESIGNATIONS

Designation	E-4510	E-4520	E-6010	E-6011	E-6012	E-6013		E-6020	E-6030	E-7010	E-7020	E-7030
Weld positions	V, F, OH, H	H, Fillet, F	F, V, OH, H	F, V, OH, H	F, V, OH, H	F, V, OH, H	F, V, OH, H	H-Fillet, F	Flat	V, F, OH, H	H-Fillet, F	Flat
General Description	Wire—coating applied before drawing	Wire—coating before drawing	Heavy coated D-C positive	Heavy coated A-C or D-C	Heavy coated D-C negative or A-C	Heavy coated A-C	Low-hydrogen D-C negative or A-C	H. coated A-C or neg. for fillets, A-C or pos. flat	Heavy coated D-C pos. or A-C	Heavy coated D-C pos. only	H. coated A-C or neg. for fillets, A-C or pos. flat	Heavy-coated D-C pos. or A-C
MANUFACTURER												
Air Reduction[1]	41 or 63		78, 78E or 79E	230	87	90 or 90A	312	81 or 315		93	94	
Allis-Chalmers			E-6010	E-6011	E-6012	E-6013 or E-6013GP	E-6015	E-6020	E-6030	E-7010	E-7020	E-7030
Alloy Rods[2]			6010	6011	6012	6013	6015	6020		7010	7020	
American Agile			White	Blue	Red-White	Blue-Red	FMS	Blue-Grey	White-Grey			
Anthony Carlin[3]	P-170 or P-180		P-50X	P-103	P-60 or P-61	P-100		P-70 or P-81		Moly-C-Alloy 1	Moly-C-Alloy 2	
Champion	Sulcoat	44	Blue Devil	Bluedac	Gray Devil Gray Devil 2	Graydac	Hy-Lo	Black Devil	Red Devil	Blue Devil 85	Black Devil 75	Red Devil 75
General Electric	L	W-3	W-22 or W-22H	W-26	W-20 or W-28	W-25	W-32	W-24 or W-27		W-52	W-54 or W-57	
Harnischfeger	Litecote Dustcote		AP	AC-1	PF or FR	SM or AC-3	70LA	DH-2			CM-50-2	
Hobart	Sulcoat		55	335	77 or 12	447 or 13		111		885	111-HT	
Hollup	Hollup 30 or 3	Hollup 30-A	Sureweld B	Sureweld CB	Sureweld N	Sureweld CN or UW	Sureweld TS	Sureweld F	Sureweld A	Sureweld MLY-50	Sureweld MLY-A	
Lincoln	Stable-Arc	Swiftweld	Fleetweld 5 5V	Fleetweld 35	Fleetweld 7	Fleetweld 37 or 47	LH-70	Fleetweld 11		Shieldarc 85	Fleetweld 11HT	
Marquette			No. 31	No. 130 or 140	No. 25	No. 151		No. 33				
McKay	21	3 or 3K	15	11	17 or 116	10 or 14	Puralloy 70	20	18	715	720	
Metal and Thermit[4]	Sulcoat	Smoothcoat	Vertex or Type R	Alternex Type A or S	Genex or Genex C	Type U	Type HTS	Fillex, Type FHP or F		Molex	Type M or Carbon-Moly .50	
Page	B Rust Lime					Hi-Tensile G	Hi-Tensile M					
Reid-Avery[5]	D or Blue Label	D or Blue Label	7	11	8	13	Ferritic	20	5	74	64	
Shober Sales			44	33	53	34		66				
A. O. Smith			SW 10	SW 14	SW 11 or 17	SW 15 or 16	SW 64	SW 35	SW 20	SW 75	SW 76 or 78	
Westinghouse	18 Sulcoat		AP	ACP	FP, SW or SW-2			DH		AP-MO	DH-MO	
Wilson	17 or 18		98, 98N, 98N V & O	530	107 or 109	520 or 520A	512	105 or 106		Alloy Rod A	Alloy Rod B	

*Trade name or Type No. is usually prefixed by company name.
V = vertical, F = flat, OH = overhead, H = horizontal, H-Fillet = horizontal fillet. [1]Airco prefix. [2] Weld-Arc. [3] Perfection prefix. [4] Murex. [5] Page prefix.

THE WELDING ENGINEER'S ENGINEERING DATA SHEET

Welding Tip Comparison Data

Standard Tip Numbers are compared by Drill Size of Tip Orifice

(When cleaning tips, it is recommended that one size smaller drill be used.)

DRILL SIZES ➡		79		77	75	73		71	69	67		65	63	61		59	57	55		53	51	49	
Tradename	Series	80	78	76		74	72	70		68	66	64		62	60	58		56	54	52		50	48
Airco	All			00			0			1				2				3	4		5		6
Rego	G, GP									68				62		58		55		53		50	
	GX, GXS, GXU						72			68				62		58		55		53		50	
	SX						72			68				62		58		55		53		50	
Dockson	4EC, 4SC, 7SC		1			2					3					4		5		6			7
	7EC		1			2					3					4		5		6			7
Gasweld	G25, G35								1			2				3		4	5	6			7
	G55			0		1			2							3		4	5	6			7
	AVG	00		0		1			2			3			4		5		6	7			
Harris	1290		00		0			1				2				3		4		5	6		7
	1390		00		0			1				2				3		4		5	6		7
	1690		00		0			1				2					3	4		5	6		7
	23-E-90					00			0		1			2		3		4	5	6		7	
Imperial	SC				0						1					2		3		4	5		
Meco	All	00		0					1			2					3	4			5		
Milburn	FX	00	0	1					2					3			4	5			6		7
	MS		0		1				2						3			4		5		6	
	J							000		00			0				1		2		3		4
	UB	0000		000		00			0			1		2		3		4		5		6	
	LM-AS		0000		000	00		0	1				2			3			4		5		
	MM-A			00			0			1				2				3	4		5		6
	LP												00		0		1		2		3		4
Smith	Lifetime							B60					B61			B62			B63	B64			B65
	No. 5							50					51			52			53	54			55
	No. 2		18		19		A20	A21		A22		A23		A24		A25		A26	A27	A28		A29	A210
Torchweld	470, 570									68				62		58			55	53		50	
Victor	All				000		000½		00		00½	0	0½		1		1½	2	2½	3	3½		4
Weldit	A, E							1				2				3			4	5	6		7
	156 Swedged						1					2					3	4		5	6		7
	JS Swedged										1			2				4		6			
	20							1				2				3			4	5	6		7
	30						1		2	3						4			5	6		7	
	40																			6			

DRILL SIZES ➡		47		45	43	41		39	37	35		33	31	1/8"	29	27		25	23	21		19	17
Tradename	Series	1/64"	46	44		42	40		38	36	34		32	30		28	26		24	22	20		18
Airco	All			7			8			9				10				11					12*
Rego	G, GP		46																				
	GX, GXS, GXU		46			42				36			31†					25			20		
	SX		46																				
Dockson	4EC, 4SC, 7SC			8		9				10			11	12		13	14		15				
	7EC			8																			
Gasweld	G25, G35			8		9	10			12		14	15										
	G55			8																			
	AVG																						
Harris	1290			8	9		10		11	12	13	14	15	16									
	1390			8	9		10																
	1590			8																			
	23-E-90		8		9		10						12	15			19		22				
Imperial	SC	6		7		8			9			10	12										
Meco	A11		6			7				8				9		10				11			12
Milburn	FX			8			9			10			11	12	13			14			15		16
	MS		7		8		9			10		11		12									
	J			5		6			7	8		9		10		12		13		14	15		
	UB			7		8					9		10										
	LM-AS			6																			
	MM-A				7		8				9												
	LP			5		6	7		8		9	10											
Smith	Lifetime			B66			B67			B68			B69			B610	B611	B612					
	No. 5			56			57																
Torchweld	470, 570		46			42				36			31										
Victor	All				5					6				7	8	9	10	11	12				
Weldit	A, E			8																			
	156 Swedged			8																			
	JS Swedged		8				10						12										
	20			8			10			12													
	30		8	9	10	12																	
	40		8		10	12					14			16									

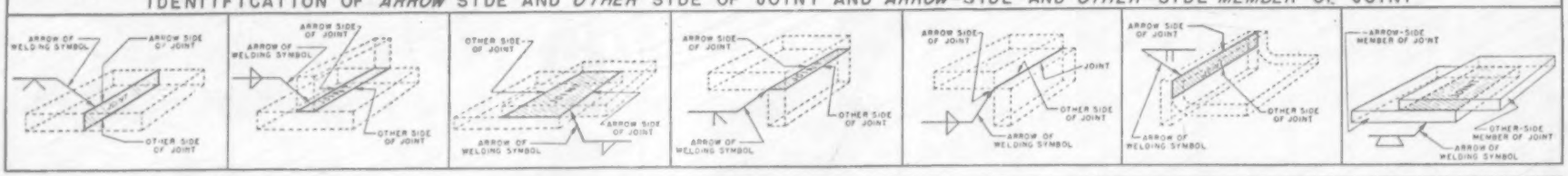
*Airco Tip No. 13=Drill Size No. 10; No. 14=Drill No. 2; No. 15=1/4 in. drill.

†GXU is not available in sizes larger than 31.

AMERICAN WELDING SOCIETY

SUMMARY OF STANDARD WELDING SYMBOLS

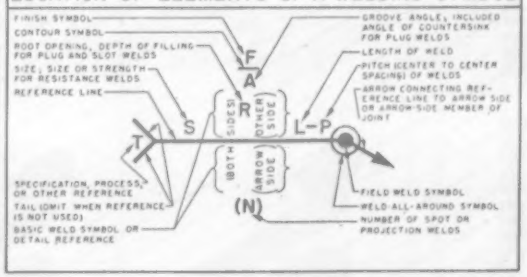
IDENTIFICATION OF *ARROW* SIDE AND *OTHER* SIDE OF JOINT AND *ARROW*-SIDE AND *OTHER*-SIDE *MEMBER* OF JOINT



BASIC WELDING SYMBOLS

LOCATION SIGNIFICANCE	ARC AND GAS WELDING SYMBOLS: BEAD	FILLET	PLUG OR SLOT	GROOVE: SQUARE	V	BEVEL	U	J	RESISTANCE WELDING SYMBOLS: PROJECTION	SPOT	SEAM	FLASH OR UPSET
ARROW SIDE	(OMITTED WHEN ARROW SIDE)									NOT USED	NOT USED	NOT USED
OTHER SIDE	(OMITTED WHEN OTHER SIDE)									NOT USED	NOT USED	NOT USED
BOTH SIDES	NOT USED		NOT USED						NOT USED	NOT USED	NOT USED	NOT USED
NO ARROW-SIDE OR OTHER SIDE SIGNIFICANCE		NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED			

LOCATION OF ELEMENTS OF A WELDING SYMBOL

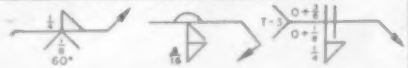


TYPICAL WELDING SYMBOLS

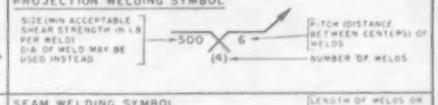
BEAD WELD SYMBOL INDICATING BEAD TYPE BACK WELD

STAGGERED INTERMITTENT-FILLET WELDING SYMBOL

WELDING SYMBOLS FOR COMBINED WELDS



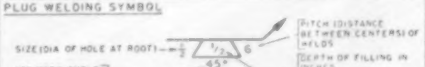
PROJECTION WELDING SYMBOL



DUAL BEAD WELD SYMBOL INDICATING BUILT-UP SURFACE

SINGLE-V GROOVE WELDING SYMBOL

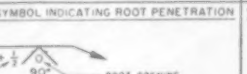
PLUG WELDING SYMBOL



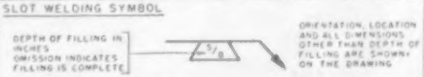
SEAM WELDING SYMBOL

DOUBLE-FILLET WELDING SYMBOL

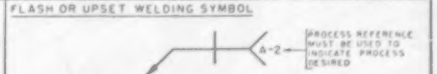
SINGLE-V GROOVE WELDING SYMBOL INDICATING ROOT PENETRATION



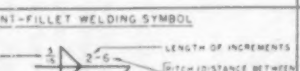
SLOT WELDING SYMBOL



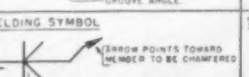
FLASH OR UPSET WELDING SYMBOL



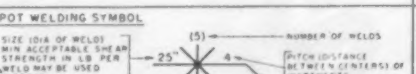
CHAIN-INTERMITTENT-FILLET WELDING SYMBOL



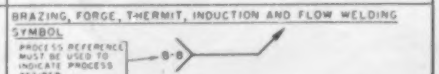
DOUBLE-BEVEL GROOVE WELDING SYMBOL



SPOT WELDING SYMBOL

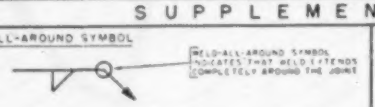


BRAZING, FORGE, THERMIT, INDUCTION AND FLOW WELDING SYMBOL

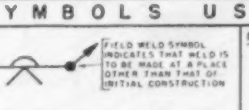


SUPPLEMENTARY SYMBOLS USED WITH WELDING SYMBOLS

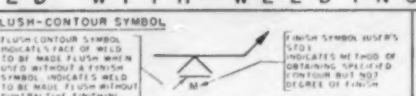
WELD-ALL-AROUND SYMBOL



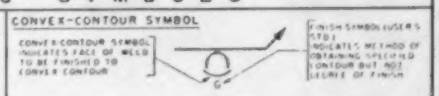
FIELD WELD SYMBOL



FLUSH-CONTOUR SYMBOL



CONVEX-CONTOUR SYMBOL



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better
easier
lower-cost

ARC WELDING

HAVE YOU SEEN "ARC WELDING AT WORK"? It's a brand new, 30-minute, sound motion picture in color—major component of General Electric's new *More Power to America* program on Electric Arc Welding. The film and accompanying literature point out clearly the design and production advantages inherent in the three primary types of arc welding—metal-arc, Inert-Arc, and atomic-hydrogen. Your G-E Arc-welding Distributor will gladly arrange a showing for you; or write: *Apparatus Dept. General Electric Company, Schenectady 5 N. Y*

A-C WELDERS

General Electric has long pioneered a-c welding—*the most advantageous method for 75 per cent of all welding applications.* G-E a-c welders (in 100- to 1000-amp ratings) include all the improvements you might expect from three decades of developmental experience . . . easier arc striking, better arc behavior, G.E.'s patented current-control system which permits unusually compact design; all these contribute to *more welding dollars in your pocket.* Ask your G-E Arc-welding Distributor for Bulletin GEA-4081A.

In addition to Inert-Arc welders, the G-E a-c welder family includes atomic-hydrogen welders for welding so-called "difficult" metals, and the new Type WP Inert-Arc welder for welding aluminum, magnesium, beryllium copper, etc., without flux and without radio interference. Bulletins GEA-823 and GEA-4930 respectively.

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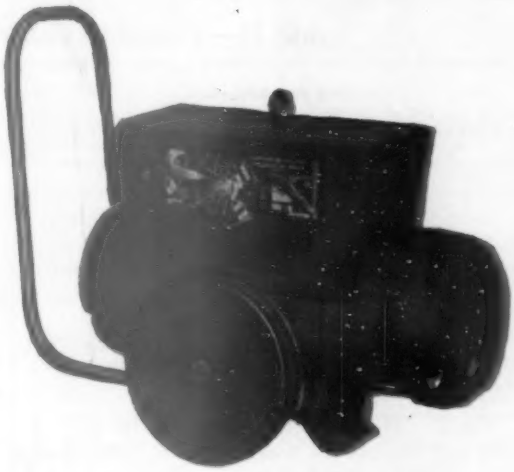
Here is your G-E answer to those applications for which d-c is recognizedly preferable—the recently announced WD-40 series d-c welders. Snappy, stable arc and higher welding efficiency . . . single-dial dual control for both precision and flexibility . . . 50% savings in size and weight . . . dependable low-cost service, easy maintenance, and a long "life-span"—all these outstanding features have been incorporated into these new machines by modern, *functional* design for *better* d-c welding. Available in 200-, 300-, and 400-amp ratings; you'll find the complete story in Bulletin GEA-4852, from your G-E Arc-welding Distributor.



ALL of the welding performance . . .
None of the "Dead-weight"

AUTOMATIC EQUIPMENT—Along with a-c or d-c welders as the source of welding current, G.E. can supply complete machine-welding equipment, including automatic welding heads, control panels, travel carriages and work-moving mechanisms, electrodes, and accessories. Bulletin GEC-244.

ELECTRODES AND ACCESSORIES—63 types of G-E welding electrodes can help provide the answer for welding mild steel, cast iron, stainless steel, phosphor bronze—general-purpose welding, and alloy and special-purpose welding. G-E welding accessories, described in catalog GEA-2704, are designed for easier welding with maximum protection.

"A-C or D-C . . .
there's G-E Arc-welding Equipment for Every Application!"

ARC WELDERS • ELECTRODES • ACCESSORIES

GENERAL ELECTRIC

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THE WELDING ENGINEER'S ENGINEERING DATA SHEET

Arc-Welding Cable Data

Table I—Arc-Welding Electrode and Ground Cables

National Rating of Welder in Amperes	Recommended Cond Size AWG*	Number of Strands	Stranding	Diameter of Conductor Inches	Over-all Diameter Inches	Resistance Ohms/1000 ft. †	Impedance Ohms/1000 ft. ‡
100	4	1,050	7/3/50/.0063	.30	.510	.318	.321
150	2	1,680	7/3/80/.0063	.38	.575	.196	.200
200	2	1,680	7/3/80/.0063	.38	.575	.196	.200
300	0	2,695	7/7/55/.0063	.46	.700	.124	.129
400	00	3,381	7/7/69/.0063	.48	.775	.095	.104
500	00	3,381	7/7/69/.0063	.48	.775	.095	.104
600	000	4,284	7/7/87/.0063	.57	.845	.078	.086

Table II—Portable Cable between Arc Welder and Power Source

A-c Arc Welders (Transformer Type with Single-Phase Primary)							Motor Driven D-c Welders									
							With A-c Motor Drive					With D-c Motor Drive				
Use Three-Conductor Cable With the Third Conductor as a Ground Wire							For 3-Phase Motors Use 4-Conductor Cable With the Fourth Conductor as a Ground Wire					Use 3-Conductor Cable with the Third Conductor as a Ground Wire				
Nom Rating of Welder in Amp	Rated Primary Load Amp	Primary Volts	Recom Cond Size*	Number of Strands	Diam of Bare Cond	Over-all Diam	Motor Rating Volts	Recom Cond Size*	Number of Strands	Diam of Bare Cond	Over-all Diam	Motor Rating Volts	Recom Cond Size*	Number of Strands	Diam of Bare Cond	Over-all Diam
100	62	110	4	49	.260	1.17	...	...	...	...	...	...	...	...	...	...
	31	220	8	49	.160	.93	...	...	...	...	...	...	...	...	...	...
	16	440	12	49	.100	.61	...	...	...	...	...	...	...	...	...	...
150	...	...	...	...	...	...	220	10	49	.130	.72	115	2	133	40	1.34
	...	...	...	...	...	...	440	14	41	.080	.60	230	6	49	.230	1.02
200	72	220	2	133	.340	1.34	220	8	49	.160	.97	115	0	133	.430	1.73
	36	440	8	49	.160	.93	440	12	49	.100	.66	230	4	49	.260	1.17
	...	...	...	...	...	...	550	14	41	.080	.60	550	10	49	.130	.66
§200	50	220	6	49	.205	1.02	...	...	...	...	...	...	...	...	...	...
	25	440	10	49	.130	.66	...	...	...	...	...	...	...	...	...	...
	20	550	12	49	.100	.61	...	...	...	...	...	...	...	...	...	...
300	77	220	2	133	.340	1.34	220	6	49	.205	1.07	115	000	259	.530	1.98
	39	440	8	49	.160	.93	440	10	49	.130	.72	230	2	133	.340	1.34
	31	550	8	49	.160	.93	550	10	49	.130	.72	550	8	49	60	.93
400	...	...	...	...	...	...	220	4	49	.260	1.23	...	...	...	...	...
	...	...	...	...	...	...	440	8	49	.160	.97	230	1	133	.380	1.59
	...	...	...	...	...	...	550	10	49	.130	.72	550	6	49	.230	1.02
500	125	220	0	133	.430	1.73	...	...	...	...	...	...	...	...	...	...
	63	440	4	49	.260	1.17	...	...	...	...	...	...	...	...	...	...
	50	550	6	49	.205	1.02	...	...	...	...	...	...	...	...	...	...
600	...	...	...	...	...	...	220	2	133	.340	1.46	...	...	...	...	...
	...	...	...	...	...	...	440	6	49	.205	1.07	230	000	259	.530	1.98
	...	...	...	...	...	...	550	8	49	.160	.97	550	4	49	.260	1.19

*Recommendation of National Electric Code.
†At 60 C Copper Temperature.
‡Based on the assumption that the two leads (electrode and work cable) are taped together.
§(With capac).

Courtesy General Electric Co.

Reprinted from February, 1942, Issue, Metal Progress

Fluxes for Oxy-Acetylene Welding & Brazing

By Houston E. Landis, Jr., and F. C. Saacke

Apparatus Research & Development Dept., Air Reduction Sales Co., Jersey City, N. J.

General Flux Characteristics

Phase — Best applied to welding rod as a paste (suspension of powdered salts in water or alcohol). Sometimes applied as a dry powder or injected as a vapor into the welding atmosphere.

Melting Point — Below temperature where an appreciable amount of oxide forms on base metal.

Film — Uniform, quiescent, transparent.

Density — Light and easily floated; no tendency to be trapped in weld metal.

Viscosity at Welding Temperatures — Should be sufficient to keep the weld metal covered and protected from gas absorption and oxidation, but not so viscous as to prevent ready fusion of the welding rod and weld metal.

Oxide Solvent — Should readily dissolve base metal oxides as well as weld metal oxides and keep contact surfaces clean at welding temperatures. (Base metal should practically always be cleaned before welding.)

Weld Appearance — All the above characteristics should combine to permit the rapid deposition of a weld free from oxides, flux inclusions, or gas pockets with smooth, clean surfaces free from overlaps or pits.

Oxy-Acetylene Welding Procedures

Base Metal	Fusion Welding			Brazing		
	Filler Metal	Flame (a)	Flux	Filler Metal	Flame (a)	Flux
Carbon steel	Low carbon steel	N	None	High zinc brass (b)	N to SO	Type C or D
	Low alloy steel	SR	None	Silver alloy	SR to N	Type H
Alloy steel	Similar to base metal	SR	None	Silver alloy	SR to N	Type H
Stainless iron & steel	Similar to base metal (d)	N	Type G	Silver alloy	SR to N	Type H
High manganese steel	Similar to base metal	N to SR	None	...	...	...
Cast iron	Similar to base metal	N	Type F	High zinc brass (b)	N to SO	Type E
Malleable iron	White cast iron (c)	N to R	Type F	High zinc brass (b)	N to SO	Type C
Galvanized iron	...	..	..	High zinc brass (b)	N to SO	Type C
Nickel	Same as base metal	R	None	Silver alloy	SR to N	Type H
Nickel-copper alloy	Same as base metal	N to SR	Type C	Silver alloy	SR to N	Type H
	Silicon-monel	N to SR	None			
Copper	Deoxidized copper	N	None	High zinc brass (b)	N to SO	Type C
				Silver alloy or phos-copper	SR to N	Type H
Silicon bronze	Similar to base metal	N to SO	Type C	High zinc brass (b)	N to SO	Type C
				Silver alloy or phos-copper	SR to N	Type H
Red or leaded brass	High zinc brass (b)	N	Type C	Silver alloy or phos-copper	SR to N	Type H
Yellow brass	Similar to base metal	O	Type C	Silver alloy or phos-copper	SR to N	Type H
Aluminum (soft)	Same as base metal	SR to N	Type A	Aluminum solder	N or R	None
Aluminum alloy (wrt.)	Same as base metal	SR to N	Type A	Aluminum solder	N or R	None
	Silicon-aluminum alloy	SR to N	Type A	...	...	...
Cast aluminum	Silicon-aluminum alloy	SR to N	Type B	...	...	...
Lead	Same as base metal	N	None	...	...	...

(a)
N—Neutral
O—Oxidizing
R—Reducing
SR—Slightly reducing
SO—Slightly oxidizing

(b) High zinc (38 to 44%) brass with additions of alloying elements such as tin, iron, manganese, silicon, nickel.

(c) Fusion welding of malleable iron should be followed by re-malleableizing heat treatment.

(d) 18-8 stainless steels often alloyed and "stabilized" with columbium, titanium, molybdenum, tungsten.

Specific Flux Characteristics

Aluminum Rod

Type A — An aluminum welding flux composed generally of alkali halides; characterized chiefly by the speed with which solid welds in sheet metal may be made with smooth fusion at the root of the weld and without pitting or discoloration on the surface.

Type B — A modified aluminum welding flux with additions of higher melting point constituents like borates and other chemicals to provide greater slagging action as well as additional viscosity, resistance to oxidation, and protection while making repairs in cast aluminum parts by puddle welding.

Bronze Rod

Type C — An "oxidizing" flux ordinarily made with a boric acid base. It should form a thin but strong oxide film on the surface of the molten copper alloy, thereby preventing gas absorption and excessive oxidation. Recommended for clean or cleaned iron and steel surfaces.

Type D — Where oxidized, rusty, or dirty surfaces are to be joined, an "oxide solvent" flux ordinarily made with a borax base and having a high solvent action for metallic oxides is recommended. It should keep both the base metal and the molten puddle clean and bright. (Note: This flux will not give as good weld metal characteristics as the Type C flux applied to clean surfaces.)

Type E — A "highly oxidizing" brazing flux designed specifically for removing carbon or graphite from the surfaces of cast iron. Usually contains an oxidizing component such as manganese dioxide. (Note: This flux often used with the Type C flux to provide the proper tinning action.)

Cast Iron Rod

Type F — Ordinarily made with a borax base and containing alkali salts to aid in fluxing the slag that forms on cast iron. Should permit ready fusion of the welding rod and base metal without leaving gas pockets or inclusions.

Stainless Steel Rod

Type G — A stainless steel welding flux designed to permit complete fusion at the root of a weld without burning. The best test for a flux of this type is to coat the root of a butt joint with the paste and then observe the penetration at the root after making the weld.

Silver Brazing Alloy

Type H — A silver "soldering" flux made from an alkali bi-fluoride and borax or boric acid; gives the best results on both non-ferrous and ferrous alloys, including stainless.

Reprinted from February, 1943, Issue, Metal Progress

Conversion Table—Inches to Millimeters

Inches		0	1	2	3	4	5	6	7	8	9	10	11	12
		mm.	25.400	50.800	76.200	101.600	127.000	152.400	177.800	203.200	228.600	254.000	279.400	304.800
1/64	.015625	0.397	25.797	51.197	76.597	101.997	127.397	152.797	178.197	203.597	228.997	254.397	279.797	305.197
1/32	.03125	0.794	26.194	51.594	76.994	102.394	127.794	153.194	178.594	203.994	229.394	254.794	280.194	305.594
1/16	.0625	1.588	26.988	52.388	77.788	103.188	128.588	153.988	179.388	204.788	230.188	255.588	280.988	306.388
3/32	.09375	2.381	27.781	53.181	78.581	103.981	129.381	154.781	180.181	205.581	230.981	256.381	281.781	307.181
1/8	.125	3.175	28.575	53.975	79.375	104.775	130.175	155.575	180.975	206.375	231.775	257.175	282.575	307.975
5/32	.15625	3.969	29.369	54.769	80.169	105.569	130.969	156.369	181.769	207.169	232.569	257.969	283.369	308.769
3/16	.1875	4.763	30.163	55.563	80.963	106.363	131.763	157.163	182.563	207.963	233.363	258.763	284.163	309.563
7/32	.21875	5.556	30.956	56.356	81.756	107.156	132.556	157.956	183.356	208.756	234.156	259.556	284.956	310.356
1/4	.25	6.350	31.750	57.150	82.550	107.950	133.350	158.750	184.150	209.550	234.950	260.350	285.750	311.150
9/32	.28125	7.144	32.544	57.944	83.344	108.744	134.144	159.544	184.944	210.344	235.744	261.144	286.544	311.944
5/16	.3125	7.938	33.338	58.738	84.138	109.538	134.938	160.338	185.738	211.138	236.538	261.938	287.338	312.738
11/32	.34375	8.731	34.131	59.531	84.931	110.331	135.731	161.131	186.531	211.931	237.331	262.731	288.131	313.531
3/8	.375	9.525	34.925	60.325	85.725	111.125	136.525	161.925	187.325	212.725	238.125	263.525	288.925	314.325
13/32	.40625	10.319	35.719	61.119	86.519	111.919	137.319	162.719	188.119	213.519	238.919	264.319	289.719	315.119
7/16	.4375	11.113	36.513	61.913	87.313	112.713	138.113	163.513	188.913	214.313	239.713	265.113	290.513	315.913
15/32	.46875	11.906	37.306	62.706	88.106	113.506	138.906	164.306	189.706	215.106	240.506	265.906	291.306	316.706
1/2	.50	12.700	38.100	63.500	88.900	114.300	139.700	165.100	190.500	215.900	241.300	266.700	292.100	317.500
17/32	.53125	13.494	38.894	64.294	89.694	115.094	140.494	165.894	191.294	216.694	242.094	267.494	292.894	318.294
9/16	.5625	14.288	39.688	65.088	90.488	115.888	141.288	166.688	192.088	217.488	242.888	268.288	293.688	319.088
19/32	.59375	15.081	40.481	65.881	91.281	116.681	142.081	167.481	192.881	218.281	243.681	269.081	294.481	319.881
5/8	.625	15.875	41.275	66.675	92.075	117.475	142.875	168.275	193.675	219.075	244.475	269.875	295.275	320.675
21/32	.65625	16.669	42.069	67.469	92.869	118.269	143.669	169.069	194.469	219.869	245.269	270.669	296.069	321.469
11/16	.6875	17.463	42.863	68.263	93.663	119.063	144.463	169.863	195.263	220.663	246.063	271.463	296.863	322.263
23/32	.71875	18.256	43.656	69.056	94.456	119.856	145.256	170.656	196.056	221.456	246.856	272.256	297.656	323.056
3/4	.75	19.050	44.450	69.850	95.250	120.650	146.050	171.450	196.850	222.250	247.650	273.050	298.450	323.850
25/32	.78125	19.844	45.244	70.644	96.044	121.444	146.844	172.244	197.644	223.044	248.444	273.844	299.244	324.644
13/16	.8125	20.638	46.038	71.438	96.838	122.238	147.638	173.038	198.438	223.838	249.238	274.638	300.038	325.438
27/32	.84375	21.431	46.831	72.231	97.631	123.031	148.431	173.831	199.231	224.631	250.031	275.431	300.831	326.231
7/8	.875	22.225	47.625	73.025	98.425	123.825	149.225	174.625	200.025	225.425	250.825	276.225	301.625	327.025
29/32	.90625	23.019	48.419	73.819	99.219	124.619	150.019	175.419	200.819	226.219	251.619	277.019	302.419	327.819
15/16	.9375	23.813	49.213	74.613	100.013	125.413	150.813	176.213	201.613	227.013	252.413	277.813	303.213	328.613
31/32	.96875	24.606	50.006	75.406	100.806	126.206	151.606	177.006	202.406	227.806	253.206	278.606	304.006	329.406

R.W.M.A. RECOMMENDED ELECTRODE MATERIALS FOR SPOT WELDING SIMILAR AND DISSIMILAR METALS USING CONVENTIONAL SPOT WELDING METHODS - -

TO WELD SIMILAR METALS

FERROUS

TO WELD SIMILAR METALS READ BLOCK UNDER METAL TO BE WELDED	TIN PLATE STEEL		TERNE PLATE STEEL		GALVANIZED IRON ZINC PLATE		CADMIUM PLATE STEEL		CHROME PLATE STEEL		STAINLESS STEEL 18-8 TYPE		SCALY H R STEEL		C.R. STEEL H.R. STEEL CLEAN	
TIN PLATE STEEL	B	I	A	I	A	I(●)	B	I	A	II	A	II(●)	B	I(●)	A	II
	I	3	I	3	I(●)	3	I	3	II	3	II(●)		I(●)	2	II	
TERNE PLATE STEEL	B	II	B	II	B	I(●)	B	I	B	I(●)						
	I	3	I	3	I	3	I	3	I	3						
GALVANIZED IRON ZINC PLATE	B	II	B	II	B	I										
	I	3	I	3	I	3										
CADMIUM PLATE STEEL	B	II	B	II												
	I	3	I	3												
CHROME PLATE STEEL	A	II(●)														
	II	3														

NON - FERROUS

TO WELD SIMILAR METALS READ BLOCK UNDER METAL TO BE WELDED	ALUMINUM		ALUMINUM ALLOYS DURALUMINUM		CUPRO NICKEL		NICKEL SILVER		NICKEL		NICKEL ALLOYS MONEL NICHOME (HIGH RES)		BRASS YELLOW 25%-40% ZINC		PHOSPHOR BRONZE GRADE A, C & D		SILICON BRONZE EVERDUR OLYMPIC BURONZE HERCULOY	
ALUMINUM	B	I(●)	B	I(●)	A	II	B	II	A	II	A	II	B	II	A	II	A	II
	I(●)	2	I(●)	2	II		II		II		II		II		II		II	
CUPRO NICKEL	B	II	B	II	B	II												
	II		II		II													
NICKEL SILVER	B	II	B	II	B	II	B	II										
	II	I	II	I	II		II	I										
NICKEL ALLOYS	A	II	A	II														
	II		II															
STAINLESS STEEL 18-8 - TYPE	B	II	B	II														
	II(●)	I	II(●)															

TO WELD DISSIMILAR METALS

FERROUS ALLOYS	STAINLESS STEEL 18-8 TYPE		CHROME PLATE STEEL		CADMIUM PLATE STEEL		GALVANIZED IRON		TERNE PLATE STEEL		TIN PLATE STEEL	
COLD ROLLED STEEL HOT ROLLED STEEL, CLEAN	A	II(●)	A	II	B	II	B	I	A	I(●)	B	I
	II		II	3	II	3	II	3	II	3	II	3
TIN PLATE STEEL			B	II	B	I(●)	B	I	B	I(●)		
			I	3	I	3	I	3	I	3		
TERNE PLATE STEEL	B	II	B	II	B	I(●)	B	I				
	I	3	I	3	I	3	I	3				
GALVANIZED IRON ZINC PLATE	B	II	B	II	B	I						
	I	3	I	3	I	3						
CADMIUM PLATE STEEL	B	II	B	II								
	I	3	I	3								
CHROME PLATE STEEL	A	II(●)										
	II	3										

NON-FERROUS ALLOYS	NICKEL ALLOYS		NICKEL		PHOSPHOR BRONZE		SILICON BRONZE		YELLOW BRASS		NICKEL SILVER	
CUPRO NICKEL	B	II			B	II	B	II			B	II
	II				II		II				II	
SILICON BRONZE EVERDUR-OLYMPIC BURONZE-HERCULOY					B	II	A	II	B	II		
					II		II		II			
NICKEL SILVER	B	II			B	II	B	II				
	II	I			II	I	II					
NICKEL ALLOYS	A	II	A	II								
	II		II									
STAINLESS STEEL 18-8 - TYPE	B	II	B	II								
	II(●)	I	II(●)									

	ALUMINUM
ALUMINUM ALLOYS DURALUMINUM	B I(●)
	I(●) 2

LEGEND

BLOCK INTERPRETATION

WELDABILITY	ELECTRODE AGAINST
ELECTRODE AGAINST	SPECIAL CONDITIONS

WELDABILITY

A - EXCELLENT
B - GOOD

ELECTRODES

R.W.M.A. SPECIFICATIONS

I - GROUP A CLASS 1
II - GROUP A CLASS 2
III - GROUP A CLASS 3

NOTE: ELECTRODE MATERIALS IN CIRCLES ARE SILVER CHROME-BRANDLE (●)

SPECIAL INFORMATION

1 - SPECIAL CONDITIONS REQUIRED
2 - GOOD PRACTICE RECOMMENDS CLEANING BEFORE WELDING
3 - IF PLATING IS HEAVY, WELD STRENGTH IS QUESTIONABLE

RESISTANCE WELDER MANUFACTURERS ASSOCIATION
R.W.M.A.
ALLOY GROUP

(●) This chart adopted by the Resistance Welder Manufacturers Association embodies the best general recommendations that can be made for the selection of the proper electrode materials for spot welding similar and dissimilar metals. - -

These recommendations for electrodes can be effective only when the other essential factors of the correct time, current and pressure are properly controlled. - -

Comparative Weights—Aluminum, Brass and Steel

Thickness or Diam in Inches		Sheets and Plates lb per sq ft			Square Wire and Bar lb per ft			Round Wire and Bar lb per ft		
Fraction	Decimal	Aluminum	Brass	Steel	Aluminum	Brass	Steel	Aluminum	Brass	Steel
1/16	.0625	.88	2.77	2.55	.005	.014	.013	.004	.011	.010
1/8	.1250	1.76	5.54	5.10	.018	.058	.053	.014	.045	.042
3/16	.1875	2.64	8.31	7.65	.041	.130	.120	.032	.102	.094
1/4	.2500	3.52	11.08	10.20	.073	.230	.213	.058	.181	.167
5/16	.3125	4.40	13.85	12.75	.115	.360	.332	.090	.283	.261
3/8	.3750	5.28	16.62	15.30	.165	.519	.478	.129	.407	.376
7/16	.4375	6.16	19.31	17.85	.224	.706	.651	.176	.555	.511
1/2	.5000	7.04	22.16	20.40	.293	.922	.850	.230	.724	.668
9/16	.5625	7.92	24.93	22.95	.371	1.167	1.076	.291	.917	.845
5/8	.6250	8.80	27.70	25.50	.458	1.441	1.328	.360	1.132	1.043
11/16	.6875	9.68	30.47	28.05	.554	1.744	1.607	.435	1.369	1.262
3/4	.7500	10.56	33.24	30.60	.659	2.075	1.913	.518	1.630	1.502
13/16	.8125	11.44	36.01	33.15	.774	2.435	2.245	.608	1.913	1.763
7/8	.8750	12.32	38.78	35.70	.898	2.824	2.603	.705	2.218	2.044
15/16	.9375	13.20	41.55	38.25	1.030	3.242	2.988	.809	2.546	2.347
1	1.0000	14.08	44.32	40.80	1.172	3.689	3.400	.921	2.897	2.670
1 1/16	1.0625	14.96	47.09	43.35	1.324	4.164	3.838	1.039	3.271	3.015
1 1/8	1.1250	15.84	49.86	45.90	1.484	4.669	4.303	1.165	3.667	3.380
1 3/16	1.1875	16.72	52.63	48.45	1.653	5.202	4.795	1.298	4.085	3.766
1 1/4	1.2500	17.60	55.40	51.00	1.832	5.764	5.313	1.439	4.527	4.172
1 5/16	1.3125	18.48	58.17	53.55	2.019	6.354	5.857	1.586	4.991	4.600
1 3/8	1.3750	19.36	60.94	56.10	2.217	6.974	6.428	1.741	5.477	5.049
1 7/16	1.4375	20.24	63.71	58.65	2.423	7.623	7.026	1.903	5.987	5.518
1 1/2	1.5000	21.12	66.48	61.20	2.638	8.300	7.650	2.072	6.519	6.008
1 9/16	1.5625	22.00	69.25	63.75	2.862	9.006	8.301	2.248	7.073	6.519
1 5/8	1.6250	22.88	72.02	66.30	3.096	9.74	8.978	2.431	7.650	7.051
1 11/16	1.6875	23.76	74.79	68.85	3.339	10.51	9.682	2.622	8.250	7.604
1 3/4	1.7500	24.64	77.56	71.40	3.590	11.30	10.41	2.820	8.873	8.178
1 13/16	1.8125	25.52	80.33	73.95	3.852	12.12	11.17	3.025	9.518	8.773
1 7/8	1.8750	26.40	83.10	76.50	4.122	12.97	11.95	3.237	10.19	9.388
1 15/16	1.9375	27.28	85.87	79.05	4.40	13.85	12.76	3.457	10.88	10.02
2	2.0000	28.16	88.64	81.60	4.69	14.76	13.60	3.683	11.59	10.68
2 1/8	2.1250	29.92	94.18	86.70	5.31	16.66	15.35	4.158	13.08	12.06
2 1/4	2.2500	31.68	99.72	91.80	5.94	18.68	17.21	4.662	14.67	13.52
2 3/8	2.3750	33.44	105.26	96.90	6.63	20.81	19.18	5.194	16.34	15.06
2 1/2	2.500	35.20	110.80	102.00	7.34	23.06	21.25	5.755	18.11	16.69
2 5/8	2.625	36.96	116.34	107.10	8.09	25.42	23.43	6.345	19.96	18.40
2 3/4	2.750	38.72	121.88	112.20	8.81	27.90	25.71	6.964	21.91	20.20
2 7/8	2.875	40.48	127.42	117.30	9.72	30.49	28.10	7.611	23.95	22.07
3	3.000	42.24	132.96	122.40	10.57	33.20	30.60	8.287	26.07	24.03
3 1/8	3.125	44.00	138.50	127.50	11.48	36.09	33.27	9.011	28.35	26.13
3 1/4	3.250	45.76	144.04	132.60	12.38	38.96	35.99	9.746	30.66	28.26
3 3/8	3.375	47.52	149.58	137.70	13.38	42.10	38.81	10.510	33.06	30.48
3 1/2	3.500	49.28	155.12	142.80	14.36	45.27	41.73	11.303	35.56	32.78
3 3/4	3.750	52.80	166.20	153.00	16.52	51.97	47.91	12.975	40.82	37.63
4	4.000	56.32	177.28	163.20	18.80	59.14	54.51	14.763	46.44	42.81
4 1/4	4.250	59.84	188.36	173.40	21.22	66.76	61.54	16.666	52.43	48.33
4 1/2	4.500	63.36	199.44	183.60	23.79	74.84	68.99	18.684	58.78	54.18
4 3/4	4.750	66.88	210.52	193.80	26.50	83.25	76.72	20.777	65.39	60.26
5	5.000	70.40	221.60	204.00	29.37	92.24	85.20	23.022	72.45	66.77
5 1/4	5.250	73.92	232.68	214.20	32.38	101.70	93.73	25.381	79.87	73.61
5 1/2	5.500	77.44	243.76	224.40	35.54	111.62	101.03	27.857	87.67	80.79
5 3/4	5.750	80.96	254.84	234.60	38.84	122.00	112.42	30.445	95.81	88.30
6	6.000	84.48	265.92	244.80	42.29	133.52	123.05	33.217	104.53	96.34
6 1/4	6.250	88.00	277.00	255.00	45.89	144.42	133.09	36.042	113.42	104.53
6 1/2	6.500	91.52	288.08	265.20	49.64	156.20	143.95	38.983	122.68	113.06
6 3/4	6.750	95.04	299.16	275.40	53.52	168.45	155.24	42.040	132.30	122.57
7	7.000	98.56	310.24	285.60	57.57	181.16	166.95	45.211	143.28	131.12
7 1/4	7.250	102.08	321.32	295.80	61.75	194.33	179.09	48.498	152.62	140.66
7 1/2	7.500	105.60	332.40	306.00	66.08	207.96	191.66	51.900	163.33	150.52
7 3/4	7.750	109.12	343.48	316.20	70.56	222.68	205.23	55.418	174.40	160.73
8	8.000	112.64	354.56	326.40	75.19	236.61	218.06	59.051	185.83	171.26

S-M-S Corp., 1165 Harper Ave., Detroit 11
Weldaloy Products Co., 10213 Harper Ave., Detroit 13
Welger Weed & Co., 11644 Cloverdale Ave., Detroit 4
Welding Sales & Engineering Co., 8750 Grinnell Ave., Detroit 13

Trade Names of Resistance-Welding Electrode Alloys and RWMA Specifications

RWMA Types	GROUP A COPPER-BASE ALLOYS					GROUP B COPPER-TUNGSTEN ALLOYS			
	Class 1	Class 2	Class 3	Class 4	Class 5	Class 10	Class 11	Class 12	Class 13
AMPCO[1]	Ampcoloy 99	Ampcoloy 97	Ampcoloy 95	Ampcoloy 86-20	Ampcoloy 92	Ampcoloy 3W1	Ampcoloy 3W10	Ampcoloy 3W20	Ampcoloy W100
COMMERCE PATTERN[2]	Elkaloy A	Mallory 3	Mallory 100	Mallory 73	Commerce H	Elkonite 1W3	Elkonite 10W3	Elkonite 20W3	Elkonite 100W
ELECTROLOY[3]	Electroloy A	Electroloy XX	Electroloy TX	Electroloy B	Electroloy Molin 2	Electroloy 1	Electroloy 10	Electroloy 20	Electroloy 100
MALLORY[4]	Elkaloy A	Mallory 3	Mallory 100	Mallory 73	Elkaloy D	Elkonite 1W3	Elkonite 10W3	Elkonite 20W3	Elkonite 100W
S-M-S[5]	Alloy 101	Alloy 103	Alloy W-5	Alloy W-2	Alloy 116	Alloy 1	Alloy 10	Alloy 20	Alloy 100W
WELDALOY[6]	—	Weldaloy 130	Weldaloy 200	—	—	—	—	—	—
WEIGER WEED[7]	WW-1	WW-2	WW-3	WW-7	WW-8	WW-1W	WW-10W	WW-20W	WW-100W
WELDING SALES[8]	Tuffaloy 88	Tuffaloy 77	Tuffaloy 55	Tuffaloy 44	Tuffaloy 66	Tuffaloy 1W-3	Tuffaloy 10W-3	Tuffaloy 20W-3	Tuffaloy 100W
AVAILABILITY	Bars Forgings	Bars Forgings Castings	Bars Forgings Castings	Bars Forgings Castings	Castings	Bars Inserts	Bars Inserts	Bars Inserts	Bars Inserts

[1] Ampco Metal, Inc., 1745 S. 38th St., Milwaukee 4

[2] Commerce Pattern Foundry & Machine Co., 7450 Melville, Detroit 17

[3] The Electroloy Co., 1600 Seaview, Bridgeport 8, Conn.

[4] R. P. Mallory & Co., Inc., 3029 E. Washington Ave., Indianapolis 6

[5] S-M-S Corp., 1165 Harper Ave., Detroit 11

[6] Weldaloy Products Co., 10213 Harper Ave., Detroit 13

[7] Weiger Weed & Co., 11644 Cloverdale Ave., Detroit 4

[8] Welding Sales & Engineering Co., 8750 Grinnell Ave., Detroit 13

THE WELDING ENGINEER'S ENGINEERING DATA SHEET

Properties of Metals

Metal or Alloy	Wt/cu ft	Specific Gravity	Melting Point F	Yield Strength	Tensile Strength	Elongation	Brinell Hardness	Modulus of Elasticity 10^6 psi	Thermal Conductivity Btu/sq ft hr/°F/in.	Electrical Conductivity %Copper	Electrical Resistivity Ohms/cmf	Coefficient of Expansion °F x 10^{-6}
Aluminum, 99%	165	2.72	1220	5,000	13,000	35	23	10.2	1570	59.0	17.6	13.8
Antimony	417	6.67	1166				30	11.2		4.0		6.7
Arsenic	367	5.72	1497							4.5		2.14
Bismuth	612	9.8	520				9	4.6		1.3	670	7.47
Brass, Yellow	535	8.6	1660	18,000	40,000	60	60	14.0		26.0	40	
Bronze, Aluminum	481	7.7	1905	30,000	76,000	55	125	15	173	15.0	80	16.5
Bronze, Manganese	522	8.38	1598	25,000	60,000	30	100	15	700	25.0	42	11.7
Bronze, Tobin	535	8.6	1625	24,000	54,000	40	100	15	810	25.0	42	11.9
Cadmium	540	8.64	1610		9,200	20	20	7.1		34.0		16.6
Chromium	419	6.7	2740				350			55.0		4.5
Cobalt	550	8.8	2700		35,000		125			16.0		12.4
Copper	557	8.93	1981	10,000	32,000	40	30	15.8	2680	100.0	10.4	9.8
Everdur	534	8.57	1866	20,000	55,000	50	95	15.0				9.6
Gold	1204	19.3	1945		17,000	45	25	13	2000	71.0	14.6	7.8
Inconel	534	8.57	2540	35,000	85,000	45	150	30	420	7.8	100	7.2
Iron, Cast	450	7.22	2300		25,000	0.5	180	13	310	2.9	400	6.0
Iron, Malleable	462	7.42	2300	37,500	57,000	22	110	12.5				6.6
Iron, Pure	490	7.86	2795	19,000	38,000	45	67	30.1	470	17.5	57	6.8
Iron, Wrought	480	7.76	2750	27,000	40,000	14*	97 to 105	29.0	418	15.0	87	6.7
Lead, Chemical	710	11.4	620	1,900	2,500	50	5	2	240	8.0	124	16.4
Lead, Tellurium	707	11.34	620	2,200	3,000	45	6	2	240	8.0	124	16.4
Magnesium, 99%	108	1.74	1240	13,000	25,000	4	40	6.5	1090	37.0	27	14.3
Manganese	475	7.3	2246		130,000	60	200			35.0	29	12.8
Molybdenum	651	10.3	4532	100,000	140,000		147	50.2		35.0	29	3.1
Monel	551	8.84	2400	35,000	75,000	40	125	26	180	3.6	290	7.8
Nichrome	517	8.19	2460	50,000	70,000	5	170		135	1.5	675	13.7
Nickel, 99%	556	8.91	2650	8,500	46,000	28	85	30	575	18.8	57	7.4
Nickel Silver 18	546	8.75	2030	20,000	58,000	40	90	18.5	230	8.3	17.5	10
Platinum	1330	21.4	3218	10,000	24,000	24	25	24	480	15.0	64	4.9
Silicon	147	2.34	2588					16.5		1.6	650	3.5
Silver	655	10.5	1762	8,000	23,000	50	30	10.5	2900	106.0	9.6	10.6
Steel, 0.15C	490	7.85	2700	40,000	60,000	35	130	30.0	460	14.5	72.0	6.7
Steel, 0.30C	490	7.85	2600	52,000	84,000	24	170	30.0	460	14.5	72.0	6.7
Steel, 0.50C	490	7.83	2500	72,000	98,000	26	201	30.0	460	14.5	72.0	6.7
Steel, Manganese	495	7.93	2450	75,000	118,000	22	300	29.0				6.7
Steel, Nickel (2330)	490	7.85	2600	84,000	105,000	25	217	30.0				6.7
Steel, Cast	490	7.85	2600	40,000	72,000	26	140	30.0	400	16	60	6.7
Steel, Stainless (304)	495	7.93	2550	35,000	85,000	55	160	29.0		2.0	460	9.3
Tin (Cast)	458	7.28	450	1,710	3,130	70	5.9	7.1	455	13.5	69	11.7
Titanium	281	4.5	3270				230	12.1				4.0
Tungsten	1191	19.1	6152		500,000			51		31.0	33.1	2.2
Vanadium	380	6.0	3182									5.6
Zinc	447	7.14	786		20,000	60	35	18.5		30.0	34	18.0

* Elongation in 8 in.

CLASSIFIED LIST

OF WELDING APPARATUS, EQUIPMENT, TOOLS AND SUPPLIES, AND MANUFACTURERS THEREOF.

IN this section products are listed alphabetically and constitute the headings. Under each heading are listed (again alphabetically) the names of manufacturers of the product referred to, together with the cities in which their main offices or general sales offices are established.

In the great majority of cases product headings are arranged alphabetically according to the noun, with the descriptive adjective or adjectives, where there are any, following, for instance, "Electrodes, Aluminum" and "Positioners, Welding." In a comparatively few cases, for reasons considered logical, products are arranged alphabetically according to the descriptive adjective. While we have used cross references extensively there may be cases where they have been inadvertently omitted. Therefore, we would advise the directory user, if he does not find a certain product listed according to the noun and there is no cross reference to turn to the place where the item would appear if listed according to the descriptive adjective.

ABRASIVES

(See also: "Emery and Other Abrasives," "Coated Abrasives—Emery, Garnet, Silicon Carbide, Aluminous Oxide, Paper and Cloths," "Belts, Abrasive," "Discs, Abrasive," "Stones, Rubbing and Sharpening," "Wheels, Grinding," "Bricks and Sticks, Abrasive," "Grains, Abrasive," "Sandpaper," etc.)

Abrasive Products, Inc., So. Braintree, Mass.
Atlantic Abrasive Corp., So. Braintree, Mass.
Bay State Abrasive Products Co., Westboro, Mass.
Behr-Manning Corp., Troy, N. Y.
Carborundum Co., The, Niagara Falls, N. Y.
Clover Mfg. Co., Norwalk, Conn.
Cortland Grinding Wheels Corp., Chester, Mass.
Divine Brothers Co., Utica, N. Y.
E. I. DuPont de Nemours & Co., Inc., Wilmington, Del.
Fibre Abrasive Corp., Chicago, Ill.
Macklin Co., Jackson, Mich.
Manhattan Rubber Mfg. Div. of Raybestos-Manhattan Inc., Passaic, N. J.
Minnesota Mining and Mfg. Co., St. Paul, Minn.
Norton Co., Worcester, Mass.
Roberts Rubber Co., Weldon, Newark, N. J.
Safety Grinding Wheel & Machine Co., Springfield, Ohio
Simonds Abrasive Co., Tacony and Fraley Sts., Phildalephia, Pa.
Sterling Grinding Wheel Div., Broad St., Tiffin, Ohio
Universal Wheel & Abrasive Corp., Chicago, Ill.

ABRASIVE BELTS

Abrasive Products, Inc., So. Braintree, Mass.
Armour Sand Paper Works, Chicago, Ill.
Armour & Co., Coated Abrasives Div., Chicago, Ill.
Behr-Manning Corp., Troy, N. Y.
Boice-Crane Co., Toledo, Ohio
Carborundum Co., The, Niagara Falls, N. Y.
Clover Mfg. Co., Norwalk, Conn.
Goodyear Tire & Rubber Co., Akron, Ohio
Haskins, R. G. Co., Chicago, Ill.
Ind. Pneum. Tool Co., Aurora, Ill.
Michigan Abrasive Co., Detroit, Mich.
Mid-West Abrasive Co., Owosso, Mich.
Minnesota Mining and Mfg. Co., St. Paul, Minn.
Norton Co., Worcester, Mass.
Porter-Cable Mach. Co., Syracuse, N. Y.
Stow Mfg. Co. Binghamton, N. Y.

ABRASIVES, Rubber

Cratex Manufacturing Co., San Francisco, Calif.
Norton Co., Worcester, Mass.
Raybestos-Manhattan, Inc., Passaic, N. J.
Weldon Roberts Rubber Co., Brightboy Industrial Div., Newark, N. J.

A-C WELDERS

(See: Welders, Arc, A-C)

ACETYLENE GAUGES

(See "Gauges, Oxygen & Acetylene")

ACETYLENE GENERATORS

(See "Generators, Acetylene")

ACETYLENE, Dissolved

Acetylene Co. of Utah, Salt Lake City, Utah
Acetylene Gas Co., St. Louis, Mo.
Acetylene Service Co., Denver, Colo.
Air Reduction Sales Co., New York City
American Compressed Gas Products Inc., Ft. Wayne, Ind.
American Gas & Chemical Corp., Harrison, N. J.
American Oxygen Service Corp., Harrison, N. J.
Air Products, Inc., Emmaus, Pa.
Atlas Acetylene Co., Kearney, N. J.
Balbach Co., The, Omaha, Neb.
Bird Gas Corp., Detroit, Mich.
Buckeye Oxygen Co., Canton, O.
Burdett Oxygen Co., The, Cleveland, Ohio
Commercial Gas Corp., Wilkes-Barre, Pa.
Houston Oxygen Co., Houston, Tex.
Independent Engineering Co., O'Fallon, Ill.
Indiana Oxygen Co., Indianapolis, Ind.
Kansas Oxygen Co., Hutchinson, Kan.
Linde Air Products Co., The, New York City
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Maine Industrial Gas Co., Lewiston, Me.
Modern Engrg. Co., Inc., St. Louis, Miss.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
New England Gas Prod. Inc., Charleston, Mass.
Oklahoma Oxygen Co., Tulsa, Okla.
Oxweld Railroad Service Co., New York City
Pacific Oxygen Co., Oakland, Calif.
Puritan Compressed Gas Corp., Kansas City, Mo.
Southern Oxygen Co., Bladensburg, Md.
Standard Acetylene Co., San Francisco, Calif.
Steel Gases, Inc., Chicago, Ill.
Superior Industrial Gas Corp., Astoria, N. Y.
Valley Oxygen Co., Bay City, Mich.
Welding Gas Products Co., Chattanooga, Tenn.
Welding Materials, Inc., Lemoyne, Pa.
West Texas Oxygen Co., Lubbock, Tex.
Wolverine Gas Products, Inc., Saginaw, Mich.

ADAPTERS

(See: Cables, Resistance Welding)

ADAPTERS, Acetylene Regulator

Arc Welding Supply Co., Bronx, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Craftsweld Equipment Corp., Long Island City, N. Y.
Dockson Corp., Detroit, Mich.
Goss Gas, Inc., Pittsburgh, Pa.
Harris Calorific Co., The, Cleveland, Ohio
Hoke Incorporated, Englewood, N. J.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Manufacturing Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
Nageldinger, J. & Son, Inc., New York, N. Y.
National Welders Supply Co., Charlotte, N. C.
National Welding Equip. Co., San Francisco, Calif.
Norgren Co., C. A., Denver, Colo.
Smith Welding Equip. Corp., Minneapolis, Minn.

AIR FILTER

(See: "Filters, Welder")

AIRLINE FILTERS

(See: "Filters, Airline")

AIR LINE FITTINGS

Aro Equipment Corp., The, Industrial Tool Div., Bryan, Ohio.
Chicago Pneumatic Tool Co., New York, N. Y.
Cleo Div., Reed Roller Bit Co., Houston, Texas

Crane Co., Chicago, Ill.
Curtis Pneumatic Machinery Div. of Curtis Mfg. Co., St. Louis, Mo.
Dallett Co., The, Philadelphia, Pa.
DeVilbiss Co., The, Toledo, Ohio
Dixon Valve & Coupling Co., Philadelphia, Pa.
Grinnell Co., Inc., Providence, R. I.
Hose Accessories Co., Philadelphia, Pa.
Hunt, C. B., & Son, Salem, Ohio
Imperial Brass Manufacturing Co., The, Chicago, Ill.
Ind. Pneumatic Tool Co., Aurora, Ill.
Ingersoll-Rand Co., New York, N. Y.
Knox Mfg. Co., Philadelphia, Pa.
Lincoln Engineering Co., St. Louis, Mo.
Lunkenheimer Co., The, Cincinnati, Ohio
Modern Engineering Co., Inc., St. Louis, Mo.
Mulconroy Co., Philadelphia, Pa.
Norgren Co., C. A., Denver, Colo.
Paasche Airbrush Co., Chicago, Ill.
Parker Appliance Co., Inc., The, Cleveland, Ohio
Schrader's, A., Son, Division of Scovill Manufacturing Co., Brooklyn, N. Y.
Snap-Tite, Inc., Erie, Pa.
Stewart-Warner Corp., Alemite Div., Chicago, Ill.
Tube Turns, Inc., Louisville, Ky.
Weatherhead Company, The, Cleveland, Ohio

AIRLINE LUBRICATORS

(See: "Lubricators, Airline")

ALLOYS BRAZING

(See: "Brazing Alloys")

ALLOYS, Hard Facing

(See: "Electrodes, Hard Facing" or Welding Rods, Hard Facing")

ALLOYS, Powder, Welding

All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Manganese Steel Div., Amer. Brake Shoe Co., Chicago Heights, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Coast Metals, Inc., S.W. Canton, Ohio
Eutectic Welding Alloys Corp., New York, N. Y.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Wall Chemical Div., Chicago, Ill.
McCauley Alloy Co., Steger, Ill.
Metro Manufacturing Co., Long Island City, N. Y.
Phillips, C. E. & Co., Detroit, Mich.
Power Weld Process Co., The, Brooklyn, N. Y.
Titanium Alloy Mfg. Co., Niagara Falls, N. Y.
Wall Colmonoy Corp., Detroit, Mich.

ALLOYS, Silver Brazing

(See: "Silver Brazing Alloys")

ALUMINUM ELECTRODES

(See: "Electrodes, Aluminum")

ALUMINUM—Granulated, Ingots and Solder, Etc.

Allen, L. B., Co., Inc., Chicago, Ill.
Aluminum Company of America, Pittsburgh, Pa.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y. (All)
Eutectic Welding Alloys Corp., New York, N. Y.
Johnson Mfg. Co., Inc., Mount Vernon, Iowa
Kester Solder Co., Chicago, Ill. (Solder)
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Reynolds Metals Co., Louisville, Ky.

ALUMINUM, Sheets, Plates, Structural Shapes, Extrusions, etc.

Aluminum Company of America, Pittsburgh, Pa.
Central Steel and Wire Co., Chicago, Ill.
Colonial Alloys Co., Philadelphia, Pa.
Reynolds Metals Co., Louisville, Ky.
Steel Sales Corp., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

ALUMINUM WELDING ROD

(See: "Welding Rods, Aluminum")

ANTI-FOG COMPOUNDS

(See: "Compounds, Anti-Fog")

ANVIL and Vise Combined

Champion Blower & Forge Co., Lancaster, Pa.
Newhall Chain Forge & Iron Co., Westwood, N. J.

ANVILS, Bench

Columbian Vise & Mfg. Co., The, Cleveland, Ohio
Fisher & Morris (Eagle Anvil Works), Trenton, N. J.
Niagara Machine & Tool Works, Buffalo, N. Y.

ANVILS, Blacksmiths'

Columbus Anvil & Forging Co., The, Columbus, Ohio. (Wrought)
Fisher & Norris (Eagle Anvil Works), Trenton, N. J.
Stanley Tools, New Britain, Conn.

ANVILS, Saw

Atkins, E. C. and Co., Indianapolis, Ind.
Disston, Henry & Sons, Inc., Tacony, Philadelphia, Pa.
Fisher & Norris (Eagle Anvil Works), Trenton, N. J.
Simonds Saw & Steel Co., Fitchburg, Mass.

APPLIANCES SAFETY

(See specific item desired such as: "Valves," "Controls," "Regulators," "Masks," "Helmets", or "Guards & Safety Appliances Machinery.")

APPLICATOR BARS

(See: "Bars, Applicator")

APRONS, Asbestos

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
American Optical Co., Southbridge, Mass.
Chicago Eye Shield Co., Chicago, Ill.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Eutectic Welding Alloys Corp., New York, N. Y.
General Detroit Corp., The, Detroit, Mich.
General Electric Co., Schenectady, N. Y.
General Scientific Equipment Co., Philadelphia, Pa.
Greene, Tweed & Co., North Wales, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Janos Asbestos Co., New York, N. Y.
Johns-Manville, New York, N. Y.
Keasby & Mattison Co., Ambler, Pa.
Mine Safety Appliance Co., Pittsburgh, Pa.
Standard Safety Equipment Co., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

APRONS, Fire Resistant Duck

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
American Optical Co., Southbridge, Mass.
Arc Welding Supply Co., Bronx, N. Y.
Chicago Eye Shield Co., Chicago, Ill.
Eastern Equipment Co., Inc., Willow Grove, Pa.
General Detroit Corp., The, Detroit, Mich.
General Scientific Equipment Co., Philadelphia, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Milburn Co., The, Detroit, Mich.
Mine Safety Appliance Co., Pittsburgh, Pa.
Paulsen-Webber Cordage Corp., New York, N. Y
Standard Safety Equipment Co., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

APRONS, Leather

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
American Optical Co., Southbridge, Mass.
Arc Welding Supply Co., Bronx, N. Y.
Bond, Charles, Co., Philadelphia, Pa.
Chicago Eye Shield Co., Chicago, Ill.
Chicago Rawhide Mfg. Co., The, Chicago, Ill.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Fibre-Metal Products Co., The, Chester, Pa.
General Electric Co., Schenectady, N. Y.
General Scientific Equipment Co., Philadelphia, Pa.
Graton & Knight Co., Worcester, Mass.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Mine Safety Appliances Co., Pittsburgh, Pa.
National Welder Supply Co., Charlotte, N. C.
Streichert, E. J., Chicago, Ill.
Tilman & Co., John, Long Beach, Calif.
Williams & Co., Inc., Pittsburgh, Pa.

ARC OXYGEN CUTTING APPARATUS

(See: "Cutting Apparatus, Arc Oxygen")

ARC STABILIZERS

(See: "Stabilizers, Arc")

ARC TIME TOTALIZER

(See: "Totalizer, Arc Time")

ARC TORCHES

(See: "Torches, Carbon Arc")

ARC WELDERS, A-C

(See: "Welders, Arc, A-C")

ARC WELDERS, Automatic

(See: "Welders, Automatic, Arc")

ARC WELDERS, D-C

(See: "Welders, Arc, D-C")

ARC WELDERS, Electronic

(See: "Welders, Arc, Electronic")

ARC WELDING VOLTAGE REGULATORS

(See: "Voltage Regulators, Arc")

ARGON, Compressed

Air Reduction Sales Co., New York, N. Y.
American Gas & Chemical Corp., Harrison, N. J.
American Oxygen Service Corp., Harrison, N. J.
Buckeye Oxygen Co., Canton, Ohio
Burdett Oxygen Co., Cleveland, Ohio
Commercial Gas Corp., Wilkes-Barre, Pa.
Linde Air Products Co., The, New York, N. Y.
New England Gas Products Co., Inc., Charleston, Mass.
Steele Gases Inc., Chicago, Ill.
Superior Industrial Gas Corp., Astoria, N. Y.
Welding Materials Inc., Lemoyne, Pa.

ASBESTOS, Sheets and Paste

Carey Philip, Mfg. Co., Cincinnati, Ohio
Foote Mineral Co., Philadelphia, Pa.
Greene, Tweed & Co., North Wales, Pa.
Janos Asbestos Co., New York, N. Y.
Johns-Manville Corp., New York, N. Y.
Keasbey & Mattison Co., Ambler, Pa.
Linde Air Products Co., The, New York, N. Y.
Quaker Rubber Corp., Philadelphia, Pa.
Raybestos-Manhattan, Inc., Passaic, N. J.

AUTOMATIC TIMERS

(See: "Timers, Resistance Welding")

BABBITT METAL

(See: "Metal Babbitt")

BAND SAW WELDERS

(See: "Welders, Band Saw")

BARS, Aluminum

Aluminum Co. of America, Pittsburgh, Pa.
Reynolds Metals Co., Louisville, Ky.

BARS, Applicator

American Manganese Steel Div. of American Brake Shoe Co., Chicago Heights, Ill.
Eutectic Welding Alloys Corp., New York N. Y.
Manganese Steel Forge Co., Phila., Pa.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Phillips, C. E. & Co., Detroit, Mich.
Standard Steel & Wire Co., Bolivar, Pa.
Steel Sales Corp., Chicago, Ill.
Stulz-Sickles Co., Newark, N. J.
Taylor-Wharton Iron & Steel Co., High Bridge, N. J.
Universal Welder Corp., Cleveland, Ohio
Wall Colmonoy Corp., Detroit, Mich.
Williams & Co., Inc., Pittsburgh, Pa.

BATTERIES, Resistance-Welding

Electric Storage Battery Co., Philadelphia
Progressive Welder Co., Detroit, Mich.

BENCH WELDERS

(See: "Welders, Bench")

BENCHES, Work, Steel

Angle Steel Stool Co., Plainwell, Mich.
Aurora Equipment Co., Equipto Division, Aurora, Ill.
Berger Manufacturing Division Republic Steel Corp., Canton, Ohio
Bond Foundry and Machine Co., Manheim, Pa.
Challenge Machinery Co., The, Grand Haven, Mich.
Delta Mfg. Division of Rockwell Mfg. Co., Milwaukee, Wis.
Lyon Metal Products, Inc., Aurora, Ill.
Market Forge Co., Everett, Mass.
New Britain Machine Co., The, New Britain, Conn.
Republic Steel Corp., Cleveland, Ohio
Richards-Wilcox Mfg. Co., Aurora, Ill.
Standard Pressed Steel Co., Jenkintown, Pa.
Stewart-Warner Corp., Alemite Div., Chicago, Ill.
Weldrite Co., Inc., Long Island City, N. Y.

BENDERS—Conduit, Pipe and Tubing

(See also: "Machines, Bending, Pipe")

American Pipe Tool Co., Chicago, Ill.
Baldwin Locomotive Works, The, Philadelphia, Pa.
Bernz, Otto, Co., Inc., Rochester, N. Y.
Blackhawk Mfg. Co., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
Durbin-Durco, St. Louis, Mo.
Duro Metal Products Co., Chicago, Ill.
Greenlee Tool Co. (Division of Greenlee Bros. & Co.), Rockford, Ill.
Imperial Brass Manufacturing Co., The, Chicago, Ill.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Parker Appliance Co., Inc., The, Cleveland, Ohio
Plomb Tool Co., Los Angeles, Calif.
Republic Steel Corp., Cleveland, Ohio
Ryerson, Joseph T., & Sons, Inc., Chicago, Ill.
Tal Bender, Inc., Milwaukee, Wis.
Templeton, Kenly & Co., Chicago, Ill.
Toledo Pipe Threading Machine Co., The, Toledo, Ohio
Watson-Stillman Co., Roselle, N. J.
Weatherhead Co., The, Cleveland, Ohio

BENDING BRAKES

(See: "Brakes, Bending")

BENDING MACHINES, Pipe

(See: "Machines, Bending, Pipe")

BENDING ROLLS

(See: "Rolls, Bending")

BLOCKS, Chain

American Hoist & Derrick Co., St. Paul, Minn.
Chester Hoist Co., Lisbon, Ohio
Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Coffing Hoist Co., Danville, Ill.
Ford Chain Block Division of American Chain & Cable Co., Inc., Philadelphia, Pa.
Harrington Co., The, Philadelphia, Pa.
Manning, Maxwell & Moore ,Inc., Shaw-Box Crane & Hoist Division, Muskegon, Mich.
Paulsen-Weber Cordage Corp., New York, N. Y.
Reading Chain & Block Corp., Reading, Pa.
Robbins & Myers, Inc., Hoist & Crane Division, Springfield, Ohio
Round, David, & Son Cleveland, Ohio
Sasgen Derrick Co., Chicago, Ill.
Wright Mfg. Division of American Chain & Cable Co., Inc., York, Pa.
Yale & Towne Mfg. Co., The (Philadelphia Division), Philadelphia, Pa.

BLOW PIPES BRAZING

(See: "Torches, Brazing")

BLOWERS, Ventilating

American Blower Corp., Detroit, Mich.
American Machine & Metals, Inc., East Moline, Ill.
Buffalo Forge Co., Buffalo, N. Y.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Irvngton, N. J.
Clarage Fan Co., Kalamazoo, Mich.
Connecticut Blower Co., Hartford, Conn.
Coppus Engineering Corp., Worcester, Mass.
Electric Blower Co., Boston, Mass.
General Blower Co., Morton Grove, Ill.
Ig Electric Ventilating Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
Jeffrey Manufacturing Co., The, Columbus, Ohio
Nelson, Herman, Corp., The, Moline, Ill.
Paasche Airbrush Co., Chicago, Ill.
Powermatic Ventilator Co., Cleveland, Ohio
Trane Co., The, LaCrosse, Wis.
United Blower Co., Inc., New York, N. Y.

BOOKS, Technical

Air Reduction Sales Co., New York, N. Y.
American Petroleum Institute, New York, N. Y.
American Society for Metals, Cleveland, Ohio
American Society of Mechanical Engineers, New York, N. Y.
American Technical Society, Chicago, Ill.
American Welding Society, New York, N. Y.
Audell, Theo. & Co., New York, N. Y.
Bruce Publishing Co., Milwaukee, Wis.
General Electric Co., Schenectady, N. Y.
Goodheart Wilcox Co., Inc., Chicago, Ill.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Bros. Co., The, Troy, O.
Lincoln Electric Co., The, Cleveland, Ohio
Linde Air Products Co., The, New York, N. Y.
Macmillan Co., New York, N. Y.
Mallory & Co., Inc., P. R., Indianapolis, Ind.
Manual Arts Press, Peoria, Ill.
McGraw-Hill Book Co., Inc., New York, N.Y. N. Y.
National Foreman's Institute, Inc., Deep River, Conn.
Pitman Publishing Corp., New York, N. Y.
Reinhold Publishing Co., New York, N. Y.
Resistance Welder Manufacturers' Association, Philadelphia, Pa.
Reynolds Metals Co., Louisville, Ky.
Van Nostrand, D., Co., Inc., New York, N. Y.
Welding Engineer, The, New York, N. Y.
Westinghouse Electric Corp., Pittsburgh,Pa.
Wiley, John & Sons, Inc., New York, N. Y.

BOOTHS, Portable Welding

Fibre Metal Products Co., The, Chester, Pa.
Kimball Safety Prod. Co., Cleveland, Ohio
Westinghouse Electric Corp., Pittsburgh, Pa.

BRACKETS, BOLTS & NUTS, RESISTANCE-WELDING

Crane Co., Chicago, Ill.
Ohio Nut & Bolt Co., Berea, Ohio
Republic Steel Corp., Cleveland, Ohio
Solar Aircraft Co., San Diego, Cal.

BRAKES, Bending

Cleveland Crane & Engineering Co., The, Wickliffe, Ohio
Elmes, Charles F., Co., Chicago, Ill.
Federal Machine & Welder Co., The, Warren, Ohio
Hydraulic Press Mfg. Co., The, Mount Gilead, Pa.
Munton Manufacturing Co., Franklin Park, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Ryerson, Joseph T., & Sons, Inc., Chicago, Ill.
Verson Allsteel Press Co., Chicago, Ill.
Warren City Mfg. Co., Warren, Ohio
Watson-Stillman Co., Roselle, N. J.

BRASS, Bars and Sheets

American Brass Co., Waterbury, Conn.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Bridgeport Brass Co., Bridgeport, Conn.
Central Steel and Wire Co., Chicago, Ill.
Chase Brass & Copper Co., Waterbury, Conn.
McCauley Alloy Co., Steger, Ill.
Mueller Brass Co., Port Huron, Mich.
Revere Copper & Brass, Inc., New York, N.Y.
Scovill Mfg. Co., Waterbury, Conn.
Steel Sales Corp., Chicago, Ill.
(BARS ONLY)
Titan Metal Mfg. Co., Bellefonte, Pa.
Williams & Co., Inc., Pittsburgh, Pa.

BRAZERS, Band Saw Electric

(See: "Welders, Band Saw")

BRAZING-ALLOY RINGS

Allen, L. B., Co., Chicago, Ill.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Platinum Works, The, Newark, N. J.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Cleveland Precision Ring & Products Co., Cleveland, Ohio
Handy & Harman, New York, N. Y.
Krieg Co., Charles W., Newark, N. J.
Phillips, C. E. & Co., Detroit, Mich.
Sherman & Co., New York, N. Y.
Steel Sales Corp., Chicago, Ill.
United Wire & Supply Corp., Providence, R. I.
Universal Welder Corp., Cleveland, Ohio
Williams & Co., Inc., Pittsburgh, Pa.

BRAZING ALLOYS

Air Reduction Sales Co., New York, N. Y.
Alladin Rod & Flux Mfg. Co., Grand Rapids, Mich.
Allen, L. B., Co., Chicago, Ill.
Allied Weld Craft, Inc., Indianapolis, Ind.
Alloy Specialties Co., Swissvale, Pa.
All State Welding Alloys Co., Inc., White Plains, N. Y.
Aluminum Company of America, Pittsburgh, Pa.
American Brass Co., Waterbury, Conn.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Bridgeport Brass Co., Bridgeport, Conn.
Central Steel & Wire Co., Chicago, Ill.
Chase Brass & Copper Co., Waterbury, Conn.

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Euctectic Welding Alloys Co., New York, N. Y.
Goldsmith Bros. Smelting & Ref. Co., Chicago, Ill.
Handy & Harman, New York, N. Y.
Hollup Corp., Chicago, Ill.
Industrial Overlay Metals, Inc., Chicago, Ill.
Krieg Co., Charles W., Newark, N. J.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
Mallory & Co., P. R., Inc., Indianapolis, Ind.
McCauley Alloy Co., Steger, Ill.
Metal Bond Mfg. Co., St. Louis, Mo.
Modern Engineering Co., Inc., St. Louis, Mo.
Mueller Brass Co., Port Huron, Mich.
National Cylinder Gas Co., Chicago, Ill.
Oxweld Railroad Service Co., The, New York, N. Y.
Phillips, C. E. & Co., Detroit, Mich.
Powder Weld Process Co., The, Brooklyn, N. Y.

(Continued on Page 36)

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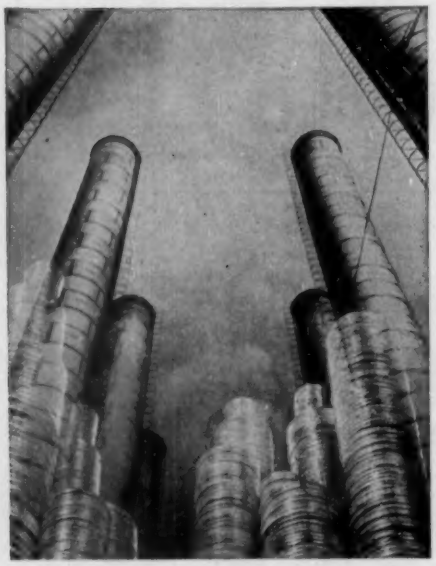

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No.	23	Phosphor-Copper-Silver Brazing Rod
No.	24	Phosphor-Bronze Electrode
No.	31	Sheet Aluminum Brazing Rod
No.	32	Aluminum Electrode
No.	33	Cast Aluminum Brazing Rod
No.	39	Aluminum Solder Rod
No.	41	General-Purpose Brazing Rod
No.	45	Brazing Compound
No.	53	Zinc-base Die Cast Rod
No.	61	Magnesium Brazing Alloy
No.	100	High-Strength Silver-Brazing Rod
No.	101	Low - Melting - Point Silver - Brazing Brazing Alloys
No.	111	Lowest-Melting-Point Silver-Brazing Rod
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BRAZING ALLOYS

(Continued from Page 35)

Revere Copper & Brass Inc., New York, N. Y.
Sherman & Co., New York, N. Y.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Steel Sales Corp., Chicago, Ill.
Titan Metal Mfg. Co., Bellefonte, Pa.
United Wire & Supply Corp., Providence, R. I.
Universal Power Corp., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Wall Colmonoy Corp., Detroit, Mich.
Westinghouse Elec. Corp., Pittsburgh, Pa.
Williams & Co., Inc., Pittsburgh, Pa.

BRAZING MACHINES, Gas

(See: "Machines, Brazing, Gas")

BRAZING OUTFITS, Gas

Air Reduction Sales Co., New York, N. Y.
American Products Corp., Chicago, Ill.
Arc Welding Supply Co., Bronx, N. Y.
Bastian-Blessing Co., Chicago, Ill.
Beaverdell Co., Chicago, Ill.
Black Mfg. Co., The, Baltimore, Md.
Burdett Oxygen Co., Cleveland, Ohio
Cesco Products, Inc., Chicago, Ill.
Dockson Corp., Detroit, Mich.
Gas Appliance Service, Inc., Chicago, Ill.
General Scientific Equipment Co., Philadelphia, Pa.
Harris Calorific Co., The, Cleveland Ohio
Imperial Brass Mfg. Co., Chicago, Ill.
K-G Welding & Cutting Co., Inc., New York, N. Y.
Linde Air Products Co., The, New York N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
Nageldinger & Son, Inc., J., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Welder Supply Co., Charlotte, N. C.
National Welding Equip. Co., San Francisco, Cal.
Oxweld Railroad Service Co., The, New York, N. Y.
Powder Weld Process Co., The, Brooklyn, N. Y.
Purity Cylinder Gases, Inc., Grand Rapids, Mich.
Ragle Industries, J. M., Kansas City, Mo.
Sight Feed Generator Co., The, Richmond, Ind.
Smith Welding Equipment Corp., Minneapolis, Minn.
Superior Oxy-Acetylene Mach. Co., Hamilton, O.
Torit Mfg. Co., St. Paul, Minn.
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Weldit, Inc., Detroit, Mich.
Williams & Co., Inc., Pittsburgh, Pa.

BRAZING OUTFITS, Incandescent Carbon

Arco Welder Mfg. Co., Inc., Milwaukee, Wis.
Banner Products Co., Milwaukee, Wisc.
Ergolyte Mfg. Co., Philadelphia, Pa.
General Electric Co., Schenectady, N. Y.
General Scientific Equipment Co., Philadelphia, Pa.
Greyhound A.C. Arc Welder Corp., Brooklyn, N. Y.
Larkin Lectro Products, New York, N. Y.
Marquette Mfg. Co., Minneapolis, Minn.
Progressive Welder Co., Detroit, Mich.
Trindl Products Ltd., Chicago, Ill.
Universal Welder Corp., Cleveland, Ohio
Weldex Inc., Detroit, Mich.
Westinghouse Elec. Corp., Pittsburgh, Pa.

BRICK, Fire

Botfield Refractories Co., Philadelphia, Pa.
Carborundum Co., The, Niagara Falls, N. Y.
General Refractories Co., Philadelphia, Pa.
Green, A. P., Fire Brick Co., Mexico, Mo.
Harbison-Walker Refractories Co., Pittsburgh, Pa.
Johns-Manville, New York, N. Y.
Laclede-Christy Co., St. Louis, Mo.
Massillon Refractories Co., The, Massillon, Ohio
Mexico Refractories Co., Mexico, Mo.
Niles Fire Brick Co., The, Niles, Ohio
North American Refractories Co., Cleveland, Ohio
Norton Co., Worcester, Mass.
Plibrico Jointless Firebrick Co., Chicago, Ill.
Quigley Company, Inc., New York, N. Y.

BRICK, Fire, Plastic

Atlantic Refractories Co., Macon, Ga.
Botfield Refractories Co., Philadelphia, Pa.
Carborundum Co., The, Niagara Falls, N. Y.
General Refractories Co., Philadelphia, Pa.
Johns-Manville, New York, N. Y.
Laclede-Christy Co., St. Louis, Mo.
Massillon Refractories Co., The, Massillon, Ohio
Mexico Refractories Co., Mexico, Mo.
North American Refractories Co., Cleveland, Ohio
Plibrico Jointless Firebrick Co., Chicago, Ill.
Quigley Co., Inc., New York, N. Y.

BRICKS and STICKS, Abrasive

Bay State Abrasive Products Co., Westboro, Mass.
Behr-Manning Corp. (Norton Abrasives), Troy, N. Y.
Carborundum Co., The, Niagara Falls, N. Y.
Cortland Grinding Wheels Corp., Chester, Mass.
Macklin Co., Jackson, Mich.
Mid-West Abrasive Co., Owosso, Mich.
Norton Co., Worcester, Mass.
Roberts, Weldon, Rubber Co., Brightboy Industrial Division, Newark, N. J.
Simonds Abrasive Co., Philadelphia, Pa.
Universal Wheel & Abrasive Corp., Chicago, Ill.

BRONZE, Bars and Sheets, Rolled

American Brass Co., The, Waterbury, Conn.
Ampco Metal, Inc., Milwaukee, Wis.
Anaconda Wire & Cable Co., New York, N. Y.
Chase Brass & Copper Co., Waterbury, Conn.
Johnson Bronze Co., New Castle, Pa.
Magnolia Metal Co., Elizabeth, N. J. (Cored & Solid)
Phosphor-Bronze Smelting Co., The, Philadelphia, Pa.
Revere Copper & Brass, Inc., New York, N. Y.
Scovill Mfg. Co., Waterbury, Conn.
Seymour Mfg. Co., The, Seymour, Conn.
Steel Sales Corp., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

BRUSHES (Motor, Generator)

Arc Welding Supply Co., Bronx, N. Y.
Becker Bros. Carbon Co., Cicero, Ill.
Joseph Dixon Crucible Co., Jersey City
General Electric Co., Schenectady, N. Y.
Haskins, R. G., Co., Chicago, Ill.
Hobart Bros. Co., Troy, O.
Keystone Carbon Co. Inc., St. Marys, Pa.
Lincoln Electric Co., The, Cleveland, Ohio
National Carbon Co., Inc., New York, N. Y.
Ohio Carbon Co., Cleveland, Ohio
Pure Carbon Co., St. Marys, Pa.
Speer Carbon Co., St. Marys, Pa.
Stackpole Carbon Co., St. Marys, Pa
US Electric Welder Corp., Toledo, Ohio
Westinghouse Elec. Corp., Pittsburgh, Pa.

BRUSHES, Rotary Wire

Black & Decker Mfg. Co., The, Towson, Md.
Ind. Pneu. Tool Co., Aurora, Ill.
Manufacturers Brush Co., The, Cleveland, Ohio
Milwaukee Elec. Tool Corp., Milwaukee, Wis.
Osborn Mfg. Co., Cleveland, Ohio
Stackpole Carbon Co., St. Marys, Pa.
Stow Mfg. Co., Binghamton, N. Y.
Van Dorn Electric Tool Co., The, Towson, Md.
Wyzenbeek & Staff, Inc., Chicago, Ill.

BRUSHES, Wheel, Wire

Anderson Corp., Worcester, Mass.
Aristo Power Tools, Inc., Chicago, Ill.
Aro Equipment Corp., The, Bryan, Ohio
Black & Decker Mfg. Co., The, Towson, Md.
Haskin, R. G., Co., Chicago, Ill.
Ideal Industries, Inc., Sycamore, Ill.
Independent Pneumatic Tool Co., Aurora, Ill.
Manufacturers Brush Co., The, Cleveland, Ohio
Millers Falls Co., Greenfield, Mass.
Milwaukee Brush Manufacturing Co., The, Milwaukee, Wis.
Milwaukee Electric Tool Corp., Milwaukee, Wis.
Osborn Manufacturing Co., Cleveland, Ohio
Pittsburgh Plate Glass Co., Brush Division, Baltimore, Md.
Solo-Horton Brush Co., Inc., New York, N. Y.
Stanley Electric Tool Division, The Stanley Works, New Britain, Conn.
United States Electric Tool Co., The, Cincinnati, Ohio
Van Dorn Electric Tool Co., The, Towson, Md.
Wyzenbeek & Staff, Inc., Chicago, Ill.

BRUSHES, Scratch

(See: "Brushes, Weld-Cleaning")

BRUSHES, Weld-Cleaning

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Anderson Corp., Worcester, Mass.
Atlas Welding Accessories Co., Ferndale, Mich.
Arc Welding Supply Co., Bronx, N. Y.
Black & Decker Mfg. Co., The, Towson, Md.
Burdett Oxygen Co., Cleveland, Ohio
Chicago Mfg. & Distributing Co., Chicago, Ill.
Eutectic Welding Alloys Corp., New York, N. Y.
Fibre-Metal Products Co., The, Chester, Pa.
General Electric Co., Schenectady, N. Y.
Hobart Brothers Co., Troy, Ohio
Industrial Products Co., Philadelphia, Pa.
Lincoln Electric Co., The, Cleveland, Ohio
Linde Air Products Co., The, New York, N.Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Manufacturers Brush Co., The, Cleveland, Ohio
Marquette Mfg. Co., Minneapolis, Minn.
Metro Manufacturing Co., Long Island City, N. Y.
National Cylinder Gas Co., Chicago, Ill.
Osborn Mfg. Co., Cleveland, Ohio
Trindl Products Ltd., Chicago, Ill.
Universal Welder Corp., Cleveland, Ohio
Van Dorn Electric Tool Co., The, Towson, Md.
Williams & Co., Inc., Pittsburgh, Pa.
Wyzenbeek & Staff, Inc., Chicago, Ill.

BRUSHES, Wire, Hand

Allen, L. B., Co., Inc., Chicago, Ill.
Anderson Corp., Worcester, Mass.
Arc Welding Supply Co., Bronx, N. Y.
Dockson Corporation, Detroit, Mich.
Fibre-Metal Products Co., The, Chester, Pa.
General Electric Co., Schenectady, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Lincoln Electric Co., The, Cleveland, Ohio
Manufacturers Brush Co., The, Cleveland, Ohio
Milwaukee Brush Manufacturing Co., The, Milwaukee, Wis.
Osborn Manufacturing Co., Cleveland, Ohio
Pittsburgh Plate Glass Co., Brush Division, Baltimore, Md.
Solo-Horton Brush Co., Inc., New York, N.Y.
Universal Power Corp., Cleveland, Ohio
Williams & Co., Inc., Pittsburgh, Pa.

BRUSHES, Wire Cup, Power

Aro Equipment Corp., The, Bryan, Ohio
Atlas Welding Accessories Co., Ferndale, Mich.
Black & Decker Mfg. Co., The, Towson, Md.
Goodell-Pratt Co., Division of Millers Falls Co., Greenfield Mass.
Independent Pneumatic Tool Co., Aurora, Ill.
Ingersoll-Rand Co., New York, N. Y.
Manufacturers Brush Co., The, Cleveland, Ohio
Milwaukee Brush Manufacturing Co., The, Milwaukee, Wis.
Milwaukee Electric Tool Corp., Milwaukee, Wis.
Osborn Mfg. Co., Cleveland, Ohio
Pittsburgh Plate Glass Co., Brush Division, Baltimore, Md.
Solo-Horton Brush Co., Inc., New York, N. Y.
Stanley Electric Tool Division, The Stanley Works, New Britain, Conn.
United States Electric Tool Co., The, Cincinnati, Ohio
Universal Welder Corp., Cleveland, Ohio
Van Dorn Electric Tool Co., The, Towson, Md.
Wyzenbeek & Staff, Inc., Chicago, Ill.

BUFFER-GRINDER, Combination

Aro Equipment Corp., The, Bryan, Ohio
Baldor Electric Co., St. Louis, Mo.
Black & Decker Mfg. Co., The, Towson, Md.
Bradford Machine Tool Co., The, Cincinnati, Ohio
Chicago Pneumatic Tool Co., New York, N. Y.
Cincinnati Electric Tool Co., The, Cincinnati, Ohio
Cleveland Electric Motor Co., Cleveland, Ohio
Delta Mfg. Division of Rockwell Mfg. Co., Milwaukee, Wis.
Divine Brothers Co., Utica, N. Y.
Elliott Mfg. Co., Binghamton, N. Y.
Duro Metal Products Co., Chicago, Ill.
Hammond Machinery Builders, Inc., Kalamazoo, Mich.
Haskins, R. G., Co., Chicago, Ill.
Hisey Wolf Mach. Co., The, Cincinnati, Ohio
Hobart Brothers Co., Troy, Ohio
Independent Pneumatic Tool Co., Aurora, Ill.
Mall Tool Co., Chicago, Ill.
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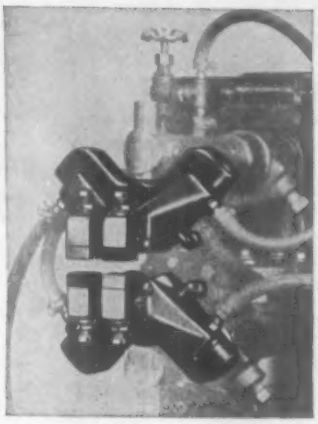

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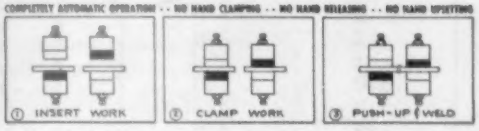

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Eclipse Fuel Engineering Co., Rockford, Ill.
Harris Calorific Co., The, Cleveland, Ohio
Hauck Manufacturing Co., Brooklyn, N. Y.
Johnson Gas Appliance Co., Cedar Rapids, Iowa
Macleod Co., The, Cincinnati, Ohio
Mahr Mfg. Co., Div. Diamond Iron Wks., Minn., Minn.
National Welding Equip. Co., San Francisco, Calif.
Purity Cylinder Gases, Inc., Grand Rapids, Mich.
Selas Corp. of America, Philadelphia, Pa.

BURNERS, Gas-Air

Dockson Corp., Detroit, Mich.
Eclipse Fuel Engineering Co., Rockford, Ill.
Eisler Engineering Co., Inc., Newark, N. J.
Gas Appliance Service, Inc., Chicago, Ill.
Harris Calorific Co., The, Cleveland, Ohio
Lindberg Engineering Co., Chicago, Ill.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Mahr Mfg. Co., Div. Diamond Iron Wks., Minn., Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
National Welding Equip. Co., San Francisco, Calif.
Selas Corp., Philadelphia, Pa.
Victor Equipment Co., San Francisco, Calif.

BURNERS, Kerosene, Portable

Harris Calorific Co., The, Cleveland, O.
Hauck Manufacturing Co., Brooklyn, N. Y.
Macleod Co., The, Cincinnati, Ohio
Mahr Mfg. Co., Div. Diamond Iron Wks., Minn., Minn.
Peterson Welding Laboratories, Kansas City, Mo.

BUTT WELDERS

(See: "Welders, Butt")

BUTT-WELDING ATTACHMENT

Acme Electric Welder Co., Los Angeles, Calif.
Ames Spot Welder Co., Inc., Brooklyn, N. Y.
DoAll Co., The, Des Plaines, Ill.
Eisler Engineering Co., Inc., Newark, N. J.

(Continued on Page 38)

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BUTT-WELDING ATTACHMENT

(Continued from Page 37)

Linde Air Products Co., The, New York, N.Y.
Hoffman, Robert W. Co., Chicago, Ill.
Rex Welder & Equipment Co., Kansas City, Mo.
Universal Welder Corp., Cleveland, Ohio

CABLE, Arc-Welding

Air Reduction Sales Co., New York, N. Y.
American Agile Corp., Cleveland, Ohio
American Oxygen Service Co., Harrison, N.J.
American Steel & Wire Co., Cleveland, Ohio
Anaconda Wire & Cable Co., New York, N.Y.
Arc Welding Supply Co., Bronx, N. Y.
Belden Mfg. Co., Chicago, Ill.
Borm Manufacturing Co., Elgin, Ill.
Burdett Oxygen Co., Cleveland, Ohio
Ergolyte Mfg. Co., Philadelphia, Pa.
Eutectic Welding Alloys Corp., New York, N. Y.
Federal Telephone & Radio Corp., Newark, N. J.
Fibre-Metal Products Co., Chester, Pa.
General Cable Corp., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Hazard Insulated Wire Works, Div. of the Okonite Co., Wilkes-Barre, Pa.
Hobart Bros. Co., Troy, O.
Hollup Corp., Chicago, Ill.
Lincoln Electric Co., The, Cleveland, Ohio
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Manufacturing Co., Long Island City, N. Y.
Miller Elec. Mfg. Co., Appleton, Wisc.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
Okonite Co., Passaic, N. J.
Roebling's Son Co., John A., Trenton, N. J.
Rome Cable Corp., Rome, N. Y.
Simplex Wire & Cable Co., Cambridge, Mass.
Smith Corp., A. O., Milwaukee, Wis.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Tennessee Coal, Iron & Railroad Co., U. S. Steel Corp. Sub., Birmingham, Ala.
Trindl Products Ltd., Chicago, Ill.
United States Rubber Co., New York, N. Y.
Universal Welder Corp., Cleveland, Ohio
Victor Electric Wire & Cable Corp., New York, N. Y.
Victor Equipment Co., San Francisco, Calif.
Welding Engineering Co., Milwaukee, Wis.
Westinghouse Elec. Corp., Pittsburgh, Pa.
Wilson Welder & Metals Co., Inc., New York.

CABLE, Resistance-Welding

Acro Welder Mfg. Co., Milwaukee, Wisc.
American Electric Fusion Corp., Chicago, Ill.
American Steel & Wire Company, Cleveland, Ohio
Anaconda Wire & Cable Co., New York, N.Y.
Burdett Oxygen Co., Cleveland, Ohio
Collyer Insulated Wire Co., Pawtucket, R. I.
Federal Telephone & Radio Corp., Newark, N. J.
General Electric Co., Schenectady, N. Y.
Hazard Insulated Wire Works, Div. of the Okonite Co., Wilkes-Barre, Pa.
Larkin Electro Products Co., New York, N.Y.
Martin Electric Co., Detroit, Mich.
Okonite Co., Passaic, N. J.
Progressive Welder Co., Detroit, Mich.
Roebling's Sons Co., John A., Trenton, N. J.
Sciaky Bros., Chicago, Ill.
Simplex Wire & Cable Co., Cambridge, Mass.
Swift Elec. Welder Co., Detroit, Mich.
Taylor-Winfield Corp., The, Warren, Ohio

Trindl Products Ltd., Chicago, Ill.
United States Rubber Co., New York, N. Y.
Uniflex Cable Co., Detroit, Mich.
Universal Welder Corp., Cleveland, Ohio
Victor Electric Wire & Cable Corp., New York, N. Y.
Welding Eng. Corp., Milwaukee, Wis.
Welding Machines Mfg. Co., Detroit, Mich.

CABLES, Welding, Power

American Agile Corp., Cleveland, Ohio
American Steel and Wire Co., Cleveland, Ohio
Anaconda Wire & Cable Co., New York, N. Y.
Arc Welding Supply Co., Bronx, N. Y.
Belden Mfg. Co., Chicago, Ill.
Burdett Oxygen Co., Cleveland, Ohio
Eutectic Welding Alloys Corp., New York, N. Y.
General Cable Corp., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Hazard Insulated Wire Works, Div. of the Okonite Co., Wilkes-Barre, Pa.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
National Welders Supply Co., Charlotte, N. C.
Okonite Co., The, Passaic, N. J.
Roebling's, John A., Sons Co., Trenton, N. J.
Simplex Wire & Cable Co., Cambridge, Mass.
Trindl Products Ltd., Chicago, Ill.
United States Rubber Co., New York, N. Y.
Victor Electric Wire & Cable Corp., New York, N. Y.
Welding Engineering Co., Milwaukee, Wis.
Williams & Co., Inc., Pittsburgh, Pa.

CAPACITORS, Energy Storage

Cornell-Dubiler Elec. Co., S. Plainfield, N. J.
Deutschman Corp., Canton, Mass.
General Electric Co., Schenectady, N. Y.
Mallory, P. R., Co., Indianapolis, Ind.
Solar Mfg. Co., North Bergen, N. J.
Westinghouse Electric Corp., Pittsburgh, Pa.

CAPACITORS, Power Factor Correction

Cornell-Dubiler Elec. Co., S. Plainfield, N. J.
Deutschman Corp., Canton, Mass.
General Electric Co., Schenectady, N. Y.
Mallory, P. R., Co., Indianapolis, Ind.
Solar Mfg. Co., North Bergen, N. J.
Westinghouse Electric Corp., Pittsburgh, Pa.

CAPE, Bib & Sleeve, Asbestos

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
American Optical Co., Southbridge, Mass.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Johns-Manville, New York, N. Y.
Standard Safety Equip. Co., Chicago, Ill.

CAPE, Bib & Sleeve, Fire Resistant Duck

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
American Optical Co., Southbridge, Mass.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Standard Safety Equip. Co., Chicago, Ill.

CAPE, Bib & Sleeve, Leather

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
American Optical Co., Southbridge, Mass.
Arc Welding Supply Co., Bronx, N. Y.
Eastern Equipment Co., Inc., Willow Grove, Pa.
General Electric Co., Schenectady, N. Y.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
Streichert, E. J., Chicago, Ill.
Tillman & Co., John, Long Beach, Calif.

CAPS, Weldors

Aljay Manufacturing Co., Inc., Philadelphia.
Champion Rivet Co., The, Cleveland, Ohio
Dunn Products, Chicago, Ill.
Fibre-Metal Products Co., The, Chester, Pa.
Hobart Brothers Co., Troy, O.
Hollup Corp., Chicago, Ill.
Lincoln Electric Co., The, Cleveland, Ohio
Metal & Thermit Corp., New York, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Safety Clothing & Equipment Co., Cleveland, Ohio
Westinghouse Electric Corp., Pittsburgh, Pa.

CARBIDE

Air Reduction Sales Co., New York, N. Y.
American Carbide & Chem. Co., St. Louis, Mo.

(Continued on Page 40)

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(Continued from Page 39)

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Independent Engineering Company, O'Fallon, Ill.
Linde Air Products Co., The, New York, N.Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Modern Engineering Co., Inc., St. Louis, Mo.
National Carbide Corp., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
Oxweld Railroad Service Co., The, New York, N. Y.
Pacific Carbide & Alloys Co., San Francisco, Calif.
Shawinigan Products Corp., New York, N. Y.
Stuart Oxygen Co., San Francisco, Calif.
Vascaloy-Ramet Corp., Waukegan, Ill.

CARBON (Blocks, Paste)

Air Reduction Sales Co., New York, N. Y.
American Agile Corp., Cleveland, Ohio
Becker Bros. Carbon Co., Cicero, Ill.
Burdett Oxygen Co., Cleveland, Ohio
Central Steel & Wire Co., Chicago, Ill.
Joseph Dixon Crucible Co., Jersey City, N. J.
Marquette Mfg. Co., Minneapolis, Minn.
National Carbon Co., Inc., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N.C.
Pure Carbon Co., Inc., St. Marys, Pa.
Speer Carbon Co., St. Marys, Pa.
Stackpole Carbon Co., St. Marys, Pa.
Williams & Co., Inc., Pittsburgh, Pa.

CARBON ELECTRODES

(See: "Electrodes, Carbon-Arc")

CAST-IRON ELECTRODES

(See: "Electrodes, Cast-Iron, Welding")

CAST-IRON WELDING ROD

(See: "Welding Rod, Cast-Iron, Welding")

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Donnelley, R. R., & Sons Co., Chicago, Ill.
North American Press, Milwaukee, Wis.
Photologue Pub. Co., Chicago, Ill.
Weinberg & McKee, Inc., Chicago, Ill.
Wisconsin Cuneo Press Inc., Milwaukee, Wis.

CATALOGS, Welding, Compiled and Printed

Photologue Pub. Co., Chicago, Ill.

CEMENT, Iron Repair

Smooth-on Mfg. Co., Jersey City, N. J.

CEMENT, Refractory

Bay State Abrasive Products Co., Westboro, Mass.
Botfield Refractories Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Carey, Philip Mfg. Co., The, Cincinnati, Ohio
Dixon, Joseph, Crucible Co., Jersey City, N.J.
Eagle-Picher Sales Co., The, Cincinnati, O.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
General Refractories Co., Philadelphia, Pa.
Green, A. P., Fire Brick Co., Mexico, Mo.
Harbison-Walker Refractories Co., Pittsburgh, Pa.
Johns-Manville, New York, N. Y.
Key Co., East St. Louis, Ill.
Laclede-Christy Co., St. Louis, Mo.
Massillon Refractories Co., The, Massillon, Ohio
Mexico Refractories Co., Mexico, Mo.
Niles Fire Brick Co., The, Niles, Ohio
North American Refractories Co., Cleveland, Ohio
Norton Co., Worcester, Mass.
Permatex Co., Inc., Brooklyn, N. Y.
Plibrico Jointless Firebrick Co., Chicago, Ill.
Quigley Co., Inc., New York, N. Y.
Smooth-on Manufacturing Co., Jersey City, N. J.
Strong, Carlisle & Hammond Co., The, Cleveland, Ohio
Titanium Alloy Mfg. Co., Niagara Falls, N.Y.

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Columbus McKinnon Chain Corp., Tonawanda, N. Y.
International Chain & Mfg. Co., York, Pa.
Jeffrey Manufacturing Co., The, Columbus, Ohio
McKay Co., The, Pittsburgh, Pa.
Newhall Chain Forge & Iron Co., Westwood, N. J.
Paulsen-Webber Cordage Corp., New York, N. Y.
Ryerson, Joseph T. & Sons, Inc., Chicago, Ill.
Taylor, S. G., Chain Co., Hammond, Ind.
Yale & Towne Mfg. Co., The (Philadelphia Division), Philadelphia, Pa.

CHAIN, Hoist

American Chain Division of American Chain & Cable Co., Inc., York, Pa.
Chain Belt Co., Milwaukee, Wis.
Chester Hoist Co., Lisbon, Ohio
Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Cleveland Chain & Mfg. Co., The, Cleveland, Ohio
Coffing Hoist Co., Danville, Ill.
Columbus McKinnon Chain Corp., Tonawanda, N. Y.
Conco Engineering Works, Mendota, Ill.
Ford Chain Block Division of American Chain & Cable Co., Inc., Philadelphia, Pa.
Harrington Co., The, Philadelphia, Pa.
International Chain & Mfg. Co., York, Pa.
Jeffrey Mfg. Co., The, Columbus, Ohio
Link-Belt Co., Atlanta Plant, Atlanta; Pershing Road Plant, Chicago; Dallas Plant, Dallas; Ewart Plant, Indianapolis; Minneapolis; Philadelphia; Pacific Division, Los Angeles; San Francisco; Seattle.
Manning, Maxwell & Moore, Inc., Shaw-Box Crane & Hoist Division, Muskegon, Mich.
McKay Co., The, York, Pa.
Newhall Chain Forge & Iron Co., Westwood, N. J.
Paulsen-Webber Corage Corp., New York, N. Y.
Philadelphia Chain Block & Mfg. Co., Inc., Philadelphia, Pa.
Round, David, & Son, Cleveland, Ohio
Ryerson, Joseph T. & Sons, Inc., Chicago, Ill.
Sasgen Derrick Co., Chicago, Ill.
Taylor, S. G. Chain Co., Hammond, Ind.
Wright Manufacturing Division of American Chain & Cable Co., Inc., York, Pa.
Yale & Towne Mfg. Co., The, (Philadelphia Division), Philadelphia, Pa.

CHIPPERS and PICKS, Scaling

(See: "Hammer, Chipping & Scaling (Hand)")

CHISELS, Chipping, Hand

Atlas Welding Accessories Co., Detroit, Mich.
Bethlehem Steel Co., Bethlehem, Pa.
Bonney Forge & Tool Works, Allentown, Pa.
Carter-Lockhard Co., Los Angeles, Calif.
Cincinnati Tool Co., The, Cincinnati, Ohio
Dallett Co., The, Philadelphia, Pa.
Damascus Steel Products Corp., Rockford, Ill.
Heller Brothers Company, Newark, N. J.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Plomb Tool Co., Los Angeles, Calif.
Quality Tools Corp., New Wilmington, Pa.
St. Pierre Chain Corp., Worcester, Mass.
Stanley Tools, Division of The Stanley Works, New Britain, Conn.
U. S. Steel Supply Co., Chicago, Ill.
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Weldo Products, Youngstown, Ohio

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Black & Decker Mfg. Co., The, Townson, Md.
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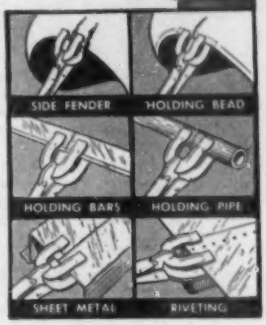

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Quality Tools Corp., New Wilmington, Pa.
Schramm, Inc., West Chester, Pa.
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Syntron Co., Homer City, Pa.
Van Dorn Electric Tool Co., The, Towson, Md.
Wen-Lyn Products, Burbank, Calif.

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Bethlehem Steel Co., Bethlehem, Pa.
Billings & Spencer Co., The, Hartford, Conn.
Bonney Forge & Tool Works, Allentown, Pa.
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Cincinnati Tool Co., The, Cincinnati, Ohio
Cleo Div., Reed Roller Bit Co., Houston, Texas
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Dallett Co., The, Philadelphia, Pa.
Damascus Steel Products Corp., Rockford, Ill.
Duro Metal Products Co., Chicago, Ill.
Goodell-Pratt Co., Division of Millers Falls Co., Greenfield, Mass.
Heller Brothers Company, Newark, N. J.
Kraeuter & Co., Inc., Newark, N. J.
Mayhew Steel Products, Inc., Shelburne Falls, Mass.
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Owatonna Tool Co., Owatonna, Minn.
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Peck, Stow & Wilcox Co., The, Southampton, Conn. (Cold only)
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Quality Tools Corp., New Wilmington, Pa.
Stanley Tools, Division of The Stanley Works, New Britain, Conn.
Williams, J. H., & Co., Buffalo, N. Y.

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Billings & Spencer Co., The, Hartford, Conn.
Black Bros. Co., Inc., The, Mendota, Ill.
Brown & Sharpe Mfg. Co., Providence, R. I.
Cincinnati Tool Co., The, Cincinnati, Ohio
Detroit Stamping Co., Detroit, Mich.
Grand Specialties Co., Chicago, Ill.
Lapeer Mfg. Co., Lapeer, Mich.
Lufkin Rule Co., The, Saginaw, Mich.
Roesch Tool Products, Los Angeles, Calif.
Seymour Smith & Son, Inc., Oakville, Conn.
Siewek Tool Division of Domestic Industries, Inc., Detroit, Mich.
Williams, J. H., & Co., Buffalo, N. Y.
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(Continued on Page 42)

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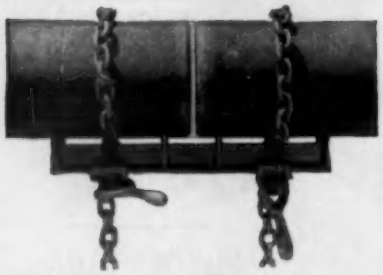

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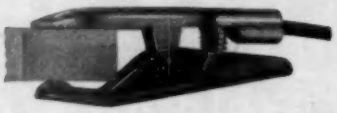

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(Continued from Page 41)

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Lapeer Mfg. Co., Lapeer, Mich.
Petersen Mfg. Co., DeWitt, Neb.

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Knu-Vise Incorporated, Detroit, Mich.
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Williams, J. H., & Co., Buffalo, N. Y.

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Bonney Forge & Tool Works, Allentown, Pa.
Chicago Boiler Co., Chicago, Ill.
Cincinnati Tool Co., The, Cincinnati, Ohio
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Sherman, H. B., Mfg. Co., Battle Creek, Mich.
Thermoid Rubber, Division of Thermoid Co., Trenton, N. J.
Williams & Co., Inc., Pittsburgh, Pa.

CLAMPS, Pipe Line

(See: "Clamps, Aligning")

Clamps, Pipe-Welding

(See: "Clamps, Aligning")

CLAMPS, Toggle

Danly Mach. Specialties Co., Inc., Chicago, Ill.
Detroit Stamping Co., Detroit, Mich.
General Welding Co., The, Cleveland, Ohio
Grand Specialties Co., Chicago, Ill.
Knu-Vise, Inc., Detroit, Mich.
Lapeer Mfg. Co., Lapeer, Mich.
Mechanics Engineering Co., Jackson, Mich.
Petersen Mfg. Co., Inc., De Witt, Neb.
Roesch Tool Products, Los Angeles, Calif.
Wolverine Tool Co., Detroit, Mich.

CLAMPS, Vise

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Aronson Machine Co., Arcade, N. Y.
Brown & Sharpe Mfg. Co., Providence, R. I.
Chicago Tool & Engineering Co., Chicago, Ill.
Cincinnati Tool Co., The, Cincinnati, Ohio.
Knu-Vise Incorporated, Detroit, Mich.
Munton Mfg. Co., Franklin Park, Ill.
Petersen Mfg. Co., De Witt, Nebr.
Production Devices, Inc., Whitehall, N. Y.
Roesch Tool Products, Los Angeles, Calif.
Williams, J. H. & Co., Buffalo, N. Y.

CLAMPS, Welding, Magnetic

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Glenn-Roberts Co., Indianapolis, Ind.
Grand Specialties Co., Chicago, Ill.
Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Scott Mfg. Co., Kansas City, Mo.
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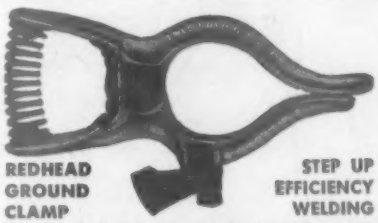

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(Continued on Page 44)

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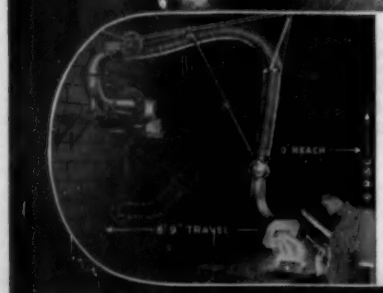

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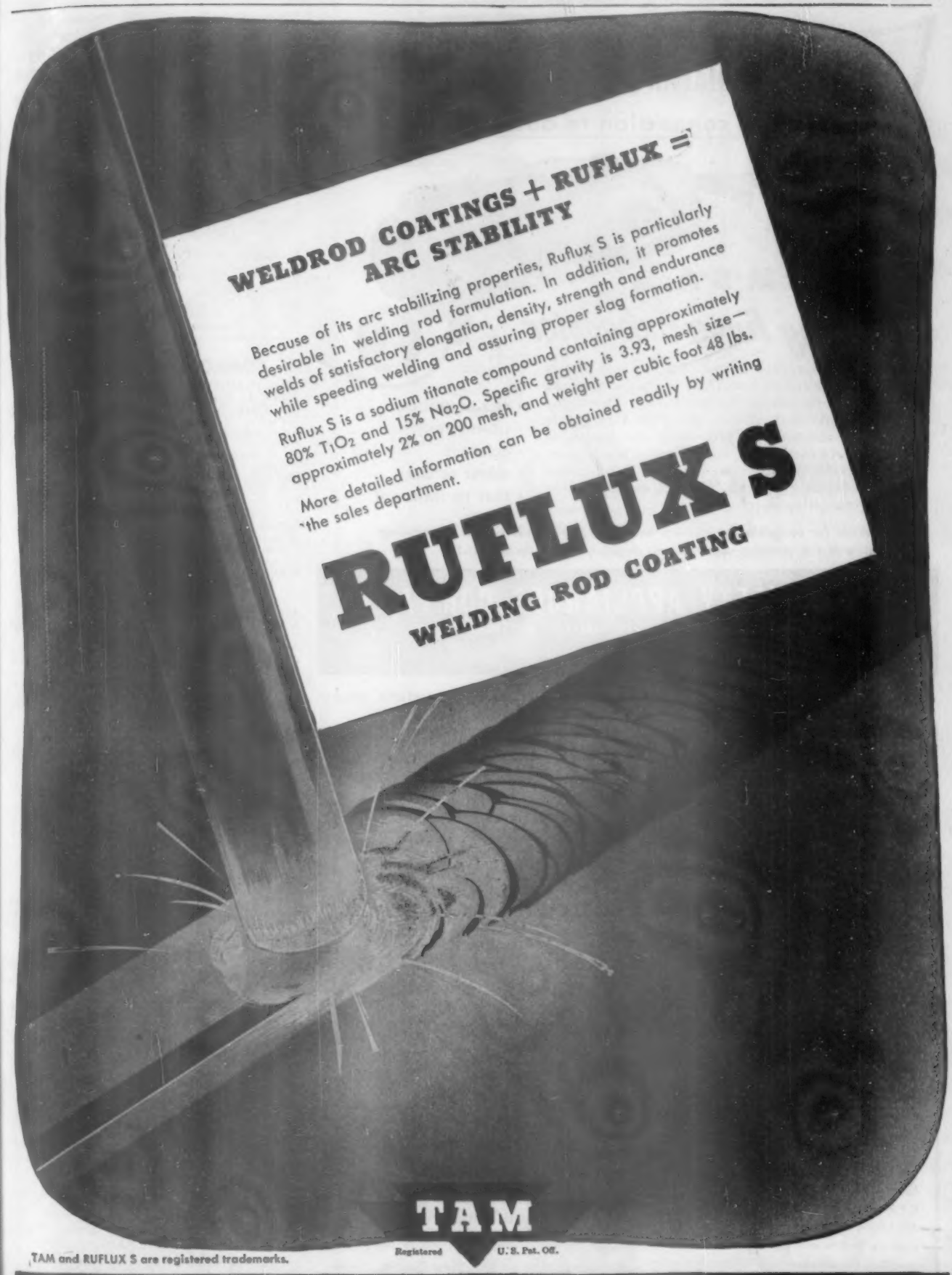
Sciaky Bros., Chicago, Ill.
F. W. Shrader, Culver City, Calif.
Westinghouse Elec. Corp., Pittsburgh, Pa.

COLLECTORS, Exhausters and Blower Systems

Aget-Detroit Co., Ann Arbor, Mich.
American Air Filter Co., Inc., Louisville, Ky.
American Blower Corp., Detroit, Mich.
American Wheelabrator and Equipment Corp., Mishawaka, Ind.
Buffalo Forge Co., Buffalo, N. Y.
Champion Blower and Forge Co., Lancaster, Pa.
Chelsea Products, Inc., Irvington, N. J.
Divine Brothers Co., Utica, N. Y.
Ideal Industries, Inc., Sycamore, Ill.
Ilg Electric Ventilating Co., Chicago, Ill.
Jeffrey Mfg. Co., The, Columbus, Ohio
Mine Safety Appliances Co., Pittsburgh, Pa.
Paasche Airbrush Co., Chicago, Ill.
Powermatic Ventilator Co., Cleveland, Ohio
Ripley Co., Inc., Middletown, Conn.

(Continued on Page 46)



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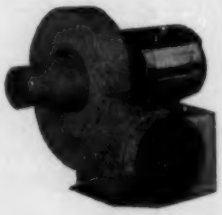

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(Continued from Page 44)

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Standard Electrical Tool Co., The, Cincinnati, Ohio
Sturtevant, B. F., Co., Division of Westinghouse Electric, Hyde Park, Boston, Mass.
Torit Manufacturing Co., St. Paul, Minn.

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Ideal Industries, Inc., Sycamore, Ill.
Ohio Carbon Co., The, Cleveland, Ohio

COMPOUNDS, Anti-Fog

Allen Optical Co., Buffalo, N. Y.
American Cyanamid Co., New York, N. Y.
American Optical Co., Southbridge, Mass.
Carhoff Co., Cleveland, Ohio
Champion Rivet Co., The, Cleveland, Ohio
Davis Emergency Equipment Co., Inc., Newark, N. J.
Industrial Products Co., Philadlephia, Pa.
McDonald Co., B. F. Los Angeles, Calif.
Merix Chemical Co., Chicago, Ill.
Milburn Co., Detroit, Mich.
Mine Safety Appliances Co., Braddock, Pittsburgh, Pa.
Willson Products, Inc., Reading, Pa.

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Cantol Wax Co., Bloomington, Ind.
Carborundum Co., Inc., Niagara Falls, N. Y.
Divine Brothers Co., Utica, N. Y.
Haskins, R. G., Co., Chicago, Ill.
Nu Steel Co., Chicago, Ill.
Sonneborn, L., Sons, Inc., New York, N. Y.
Special Chemicals Corp., New York, N. Y.

COMPOUNDS, Case Hardening and Tempering

American Cyanamid Co., New York, N. Y.
Anti-Borax Compound Co., Inc., Fort Wayne, Ind.
Holde, A. F., Co., The, New Haven, Conn.
Houghton, E. F. & Co., Philadelphia, Pa.

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Carbide and Carbon Chemicals Corp., Unit of Union Carbide and Carbon Corp., New York, N. Y.
Diener, Geo. W., Mfg., Co., Chicago, Ill.
Pyrene Manufacturing Co., Newark, N. J.

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Air Reduction Sales Co., New York, N. Y.
Allen, L. B., Co., Inc., Chicago, Ill.
Anti-Borax Compound Co., Fort Wayne, Ind.
Bastian-Blessing Co., Chicago, Ill.
Cortland Welding Compound Co., Cortland, N. Y.
Dockson Corp., Detroit, Mich.
Imperial Brass Manufacturing Co., Chicago, Ill.
K-G Welding & Cutting Co., Inc., New York, N. Y.
Lincoln Electric Co., The, Cleveland, Ohio
Linde Air Products Co., The, Unit of Union Carbide and Carbon Corp., New York, N. Y.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Modern Engineering Co., St. Louis, Mo.
Smith Welding Equipment Corp., Minneapolis, Minn.
Special Chemicals Co., New York, N. Y.
Torchweld Equipment Co., Chicago, Ill.
Victor Equipment Co., Victor Welding Equipment Division, San Francisco, Calif.

COMPOUNDS, Galvanizing

Aget-Detroit Co., Ann Arbor, Mich.
Allen, L. B., Co., Chicago, Ill.
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American Solder & Flux Co., Philadelphia, Pa.
E. I. duPont deNemours & Co., Grasselli Chemicals Dept., Wilmington, Del.
Eutectic Welding Alloys Co., New York, N. Y.
Farrelloy Co., Philadelphia, Pa.
Galv-Weld, Inc., Dayton, Ohio
Johnson Mfg. Co., Inc., Mt. Vernon, Iowa
Ohmer, George H., Dayton, Ohio
Turco Products, Inc., Los Angeles, Calif.
Victor Equipment Co., San Francisco, Calif.
Williams & Co., Inc., Pittsburgh, Pa.

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Allen, L. B., Co., Chicago, Ill.
All State Welding Alloy Co., Inc., White Plains, N. Y.
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Eagle-Picher Co., The, Cincinnati, Ohio
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Farrelloy Co., Philadelphia, Pa.
Johnson, Lloyd S., Co., Chicago, Ill.
Johnson Mfg. Co., Inc., Mt. Vernon, Iowa
Klem Chemicals, Inc., Dearborn, Mich.
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National Lead Co., New York, N. Y.
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Remont Mfg. Co., Lombard, Ill.
Ruby Chemical Co., The, Columbus, Ohio
Wayne Chemical Products Co., Detroit, Mich.
York Engineering Co., Chicago, Ill.

COMPRESSORS, Air

Allis-Chalmers Manufacturing Co., Milwaukee, Wis.
Brunner Manufacturing Co., Utica, N. Y.
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Chicago Pneumatic Tool Co., New York, N. Y.
Curtis Pneumatic Machinery, Div. of Curtis Mfg. Co., St. Louis, Mo.
DeVilbiss Co., The, Toledo, Ohio
Fairbanks, Morse & Co., Chicago, Ill.
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Hobart Brothers Co., Troy, Ohio
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
Kellogg Division of The American Brake Shoe Co., Rochester, N. Y.
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Schramm, Inc., West Chester, Pa.
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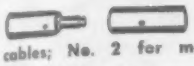
For quick detach or "jump-in" of welding cables.



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CONNECTIONS, Hose

(See: "Unions, Hose," "Couplings and Fittings, Hose")

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Belder Mfg. Co., Chicago, Ill.
Burndy Engineering Co., Inc., New York, N. Y.
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Chicago Tool & Engineering Co., Chicago, Ill.
Craftsweld Equipment Corp., Long Island City, N. Y.
Dallett Co., The, Philadelphia, Pa.
Detroit Electrode Holder Mfg. Co., Detroit, Mich.
Durd Engineering Co., New Haven, Conn.
Fibre Metal Products Co., The, Chester, Pa.
General Electric Co., Schenectady, N. Y.
Har-Worth Mfg. Co., Sherwood, Ore.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
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Lincoln Electric Co., The, Cleveland, Ohio
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
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Smith Corp., A. O., Milwaukee, Wisc.
Stevens & Co., Inc., C. H., S. Norwalk, Conn.
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Westinghouse Elec. Corp., Pittsburgh, Pa.
Will-Weld Mfg. Co., Inc., Omaha, Neb.

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Larkin Lectro Products Co., New York, N. Y.
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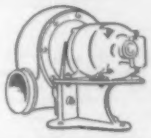

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Weltronic Co., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.

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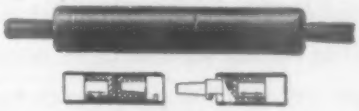
Cutler-Hammer, Inc., Milwaukee, Wisc.
Electric Controller & Mfg. Co., The, Cleveland, Ohio
General Electric Co., Schenectady, N. Y.
Shrader, F. W., Co., Culver City, Calif.
Square D Co., Milwaukee, Wisc.
Trumbull Electric Mfg. Co., The, Plainville, Conn.
Westinghouse Electric Corp., Pittsburgh, Pa.



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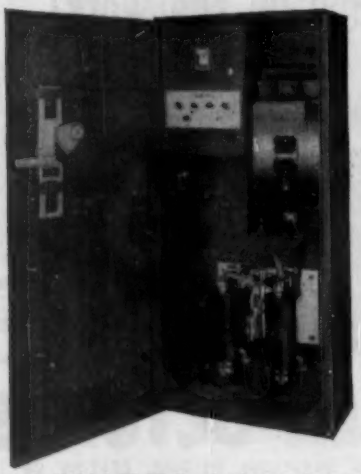

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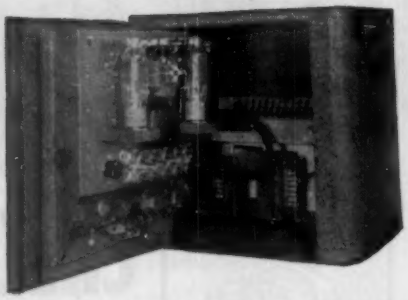

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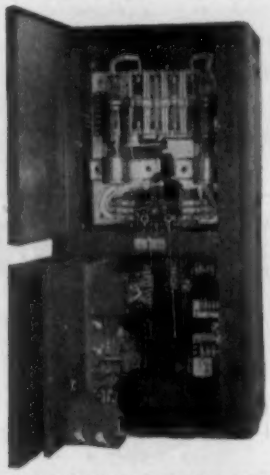

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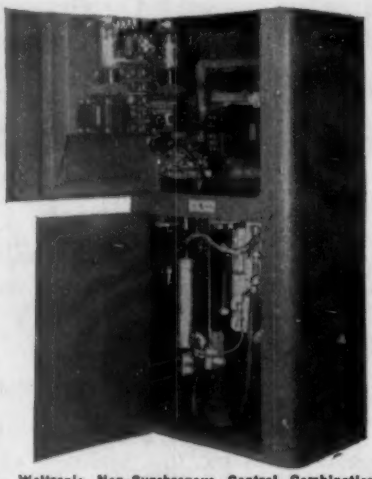

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Electrical Controller & Mfg. Co., The, Cleveland, Ohio
Electrical Industries, Inc., Newark, N. J.
General Electric Co., Schenectady, N. Y.
Metron Instrument Co., Denver, Colo.
Mullenbach Electrical Mfg. Co., Los Angeles, Calif.
National Time & Signal Corp., Detroit, Mich.
Photoswitch Inc., Cambridge, Mass.
Photovolt Corp., New York, N. Y.
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Raytheon Mfg. Corp., Waltham, Mass.
Rees, Mackworth G., Inc., Detroit, Mich.
Ripley Co., Inc., Middletown, Conn.
Sciaky Bros., Chicago, Ill.
Square D Co., Milwaukee, Wisc.
Taylor-Winfield Corp., The, Warren, Ohio
Thermo Electric Mfg. Co., Dubuque, Iowa
Universal Welder Corp., Cleveland, Ohio
Vangtronic Corp., The, Bridgeport, Conn.
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Dixon Valve & Coupling Co., Philadelphia, Pa.
Gates Rubber Co., Denver, Colo.
General Detroit Corp., The, Detroit, Mich.
Goss Gas Inc., Pittsburgh, Pa.
Harris Calorific Co., The, Cleveland, Ohio
Hose Accessories Co., Philadelphia, Pa.
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Imperial Brass Mfg. Co., The, Chicago, Ill.
Ind. Pneumatic Tool Co., Aurora, Ill.
Ingersoll-Rand Co., New York, N. Y.
Keller Tool Co., Grand Haven, Mich.
Linde Air Products Co., The, New York, N. Y.

Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
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Lincoln Electric Co., The, Cleveland, Ohio
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Markal Co., Chicago, Ill.
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Whittaker, Clark & Daniels, Inc., New York, N. Y.

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General Electric Co., Schenectady, N. Y.
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American Optical Co., Southbridge, Mass.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Janos Asbestos Co., New York, N. Y.
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Raybestos-Manhattan, Inc., Passaic, N. J.
Williams & Co., Inc., Pittsburgh, Pa.

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Eastern Equipment Co., Inc. Willow Grove, Pa.
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Industrial Products Co., Philadelphia, Pa.
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With a Hand Torch...
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- Universal application. Eliminates use of clumsy clamps, assures true edges.
- Magnetic holders attach to any template or jig for production line contour cutting.

CUT-O-GUIDE
Was originated by a FLAME CUTTER For all flame cutting operations.

CUT-O-GUIDE Sales Co. 1900 Euclid Ave. Cleveland 15, Ohio
Please ship ( ) circle cutter (s), ( ) Straight edge (s) @ $24.75. I understand I may return units within 10 days-charges prepaid-and receive my money back if not entirely satisfied.
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CITY.....ZONE.....STATE.....
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CUTTERS, Bolt and Rod

Beaver Pipe Tools, Inc., Warren, Ohio
Manco Mfg. Co., Bradley, Ill.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Porter, H. K., Inc., Somerville, Mass.

CUTTERS, Flue and Tube

American Pipe Tool Co., Chicago, Ill.
Calder Mfg. Co., Lancaster, Pa.
Parker Appliance Co., The, Cleveland, Ohio
Vincent Steel Process Co., Detroit, Mich.

CUTTERS, Pipe

American Pipe Tool Co., Chicago, Ill.
Armstrong Bros. Tool Co., Chicago, Ill.
Beaver Pipe Tools, Inc., Warren, Ohio
Collmer Bros., South Bend, Ind.
Disston, Henry, & Sons, Inc., Tacony, Philadelphia, Pa.
Hollands Mfg. Co., Erie, Pa.
McBurney, A. D., Los Angeles, Calif.
Nye Tool & Machine Co., Chicago, Ill.
Oster Manufacturing Co., The, Cleveland, Ohio
Parker Appliance Co., Inc., The, Cleveland, Ohio

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Either large or extremely small diameter rods in various materials can be rapidly cut off without distortion and to very close tolerances for length, squareness and concentricity with the DI-ACRO Rod Parter. Two models, capacities up to 3/8" and 5/8" round bars.

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Reed Manufacturing Co., Erie, Pa.
Ridge Tool Co., The, Elyria, Ohio
Toledo Pipe Threading Machine Co., The, Toledo, Ohio
Trimont Mfg. Co., Div. of Aetna Industrial Corp., Roxbury, Mass.

CUTTERS, Wire

Aufhauser Brothers Corp., New York, N. Y.
Bartlett Mfg. Co., Detroit, Mich.
Champion De Arment Tool Co., Meadville, Pa.
Crescent Tool Co., Jamestown, N. Y.
Duro Metal Products Co., Chicago, Ill.
Ideal Industries, Inc., Sycamore, Ill.
Lewis Mach. Co., The, Cleveland, Ohio
Manco Mfg. Co., Bradley, Ill.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Porter, H. K., Inc., Somerville, Mass.

CUTTING APPARATUS, Arc Oxygen

Arcos Corp., Philadelphia, Pa.

CUTTING GUIDES

Gaso Equipment Co., Chicago, Ill.
General Welding & Equip. Co., Boston, Mass.
Cut-O-Guide Sales Co., Cleveland, Ohio
Harris Calorific Co., The, Cleveland, Ohio
Har-Worth Mfg. Co., Sherwood, Oregon
Industrial Oxygen Co., Louisville, Ky.
K-G Welding and Cutting Co., New York, N. Y.
Linde Air Products Co., New York, N. Y.
Nageldinger, John & Son, Inc., New York, N. Y.
National Welding Equip. Co., San Francisco, Calif.
Ohmstede Mach. Works, Beaumont, Texas
Scientific Research Co., Portland, Ore.
Shrader, F. W., Co., Culver City, Calif.
Universal Power Corp., Cleveland, Ohio

CUTTING MACHINES, Gas

(See: "Machines, Cutting, Flame")

CUTTING TORCHES, Gas

(See: "Torches, Cutting, Gas")

CUTTING TORCHES, Underwater

(See: "Torches, Cutting, Underwater")

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American Gas & Chemical Corp., Harrison, N. J.
Amer. Oxygen Service Corp., Harrison, N. J.
Burdett Oxygen Co., Cleveland, Ohio
Coyne Manufacturing Co., San Francisco, Calif.
Independent Engineering Co., O'Fallon, Ill.
Kidde & Co., Walter, Inc., Belleville, N. J.
Linde Air Products Co., The, New York, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Tube Co., Pittsburgh, Pa.
Pressed Steel Tank Co., Milwaukee, Wisc.
Southern Oxygen Co., Inc., Bladensburg, Mo.
Taylor Cylinder Div., Cuneo Press, Chicago, Ill.
Taylor-Wharton Iron & Steel Co., High Bridge, N. J.
Wall Colmonoy Corp., Detroit, Mich.

CYLINDERS, Oxygen

Air Reduction Sales Co., New York, N. Y.
American Gas & Chemical Corp., Harrison, N. J.
American Oxygen Service Corp., Harrison, N. J.
Burdett Oxygen, Co., Cleveland, Ohio
Harrisburg Steel Corp., Harrisburg, Pa.
Independent Engineering Co., O'Fallon, Ill.
Walter Kidde & Co., Inc., Belleville, N. J.
Linde Air Products Co., New York, N. Y.
Marison Co., The, So. Elgin, Ill.
Modern Engineering Co., Inc., St. Louis, Mo.
Nageldinger & Sons, Inc., J., New York, N. Y.
National Tube Co., Pittsburgh, Pa.
Pressed Steel Tank Co., Milwaukee, Wis.
Taylor-Wharton Iron & Steel Co., High Bridge, N. J.

CYLINDER TRUCKS

(See: "Trucks, Cylinder")

D-C WELDER CONTROLS

(See: "Control, Start-Stop for D-C Sets")

D-C WELDERS

(See: "Welders, Arc, D-C")

DEMAGNETIZER

General Electric Co., Schenectady, N. Y.
Ideal Industries, Inc., Sycamore, Ill.
Sherr Co., Inc., George, New York, N. Y.
Shrader, F. W., Co., Culver City, Calif.

DIES, Bending and Trimming

Federal Machine & Welder Co., Warren, Ohio
Hamilton Tool Co., The, Hamilton, Ohio
New England Carbide Tool Co., Inc., Cambridge, Mass.
Verson Allsteel Press Co., Chicago, Ill.

DIES, Bolt

Armstrong Bros. Tool Co., Chicago, Ill.
Bay State Tap & Die Co., Mansfield, Mass.
Beaver Pipe Tools, Inc., Warren, Ohio
Butterfield Division Union Twist Drill Co., Derby Line, Vt.
Card, S. W., Mfg. Co., Division of Union Twist Drill Co., Mansfield, Mass.
Champion Blower & Forge Co., Lancaster, Pa.
Champion Rivet Co., The, Cleveland, Ohio
Greenfield Tap & Die Corp., Greenfield, Mass.
Hollands Mfg. Co., Erie, Pa.
Mayhew Steel Products, Inc., Shelburne Falls, Mass.
Morse Twist Drill & Machine Co., New Bedford, Mass.
Nye Tool Co., Chicago, Ill.
Oster Manufacturing Co., The, Cleveland, Ohio
Reed Manufacturing Co., Erie, Pa.
Standard Tool Co., Cleveland, Ohio
Threadwell Tap & Die Co., Greenfield, Mass.
Toledo Pipe Threading Machine Co., The, Toledo, Ohio

DIES, Projection-Welding

Acro Welder Mfg. Co., Milwaukee, Wis.
American Electric Fusion Corp., Chicago, Ill.
Ampco Metal, Inc., Milwaukee, Wis.
Cleveland Tungsten, Inc., Cleveland, Ohio
Fansteel Metallurgical Corp., N. Chicago, Ill.
The Federal Machine & Welder Co., Warren, Ohio
Martin Electric Co., Detroit, Mich.
Mallory, P. R. & Co., Inc., Indianapolis, Ind.
National Elec. Welding Mach. Co., Bay City, Mich.
Pier Equipment Mfg. Co., Benton Harbor, Mich.
Precision Welder & Machine Co., Cincinnati, Ohio
Progressive Welder Co., Detroit, Mich.
Resistance Welder Corp., Detroit, Mich.
Sciaky Bros., Chicago, Ill.
S-M-S Corp., Detroit, Mich.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., The, Warren, O.
Thomson Electric Welder Co., Lynn, Mass.
Universal Power Corp., Cleveland, Ohio
Weiger Weed & Co., Div. of Fanstee Metallurgical Corp., Detroit, Mich.
Weldaloy Products Co., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.
Welding Sales & Engineering Co., Detroit, Mich.

DIES, Stamping

Acromark Co., The, Elizabeth, N. J.
Diener, Geo. W., Mfg. Co., Chicago, Ill.
Hamilton Tool Co., The, Hamilton, Ohio
New England Carbide Tool Co., Inc., Cambridge, Mass.
Paine Co., The, Chicago, Ill.
Schwerdtle Stamp Co., The, Bridgeport, Conn.
Verson Allsteel Press Co., Chicago, Ill.

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American Pipe Tool Co., Chicago, Ill.
Armstrong Bros. Tool Co., Chicago, Ill.
Bay State Tap & Die Co., Mansfield, Mass.
Beaver Pipe Tools, Inc., Warren, Ohio
Butterfield Division Union Twist Drill Co., Derby Line, Vt.
Card, S. W., Mfg. Co., Division of Union Twist Drill Co., Mansfield, Mass.
Champion Blower and Forge Co., Lancaster, Pa.
Greenfield Tap & Die Corp., Greenfield, Mass.
Hollands Mfg. Co., Erie, Pa.
Mayhew Steel Products, Inc., Shelburne Falls, Mass.
Morse Twist Drill & Machine Co., New Bedford, Mass.
Nye Tool Co., Chicago, Ill.
Oster Manufacturing Co., The, Cleveland, Ohio
Pratt & Whitney, Div. Niles-Bement-Pond Co., West Hartford, Conn.
Ridge Tool Co., The, Eyiria, Ohio
Threadwell Tap & Die Co., Greenfield, Mass.
Toledo Pipe Threading Machine Co., The, Toledo, Ohio
Winter Brothers Co., Wrentham, Mass.

DIPPER TEETH, Repointers (Wedge Bars)

American Manganese Steel Div., American Brake Shoe Co., Chicago Heights, Ill.
Stultz Sickles Co., Newark, N. J.

DIPPERS, Solder

American Pipe Tool Co., Chicago, Ill.
Harris, Arthur, & Co., Chicago, Ill.

DISCS, Abrasive

Abrasive Products, Inc., South Braintree, Mass.
Albertson & Co., Inc., Sioux City, Iowa
Armour & Co., Coated Abrasives Div., Chicago, Ill.
Bay State Abrasive Products Co., Westboro, Mass.
Behr-Manning Corp., Troy, N. Y.
Carborundum Co., The, Niagara Falls, N. Y.
Chicago Wheel & Mfg. Co., Chicago, Ill.
Clover Mfg. Co., Norwalk, Conn.
de Sanno, A. P., & Sons, Inc., Phoenixville, Pa.
Haskins, R. G., Co., Chicago, Ill.
Macklin Co., Jackson, Mich.
Michigan Abrasive Co., Detroit, Mich.
Mid-West Abrasive Co., Owosso, Mich.
Minnesota Mining & Mfg. Co., St. Paul, Minn.
Norton Co., Worcester, Mass.
Raybestos-Manhattan, Inc., Passaic, N. J.
Roberts, Weldon Rubber Co., Brightboy Industrial Division, Newark, N. J.
Simonds Abrasive Co., Philadelphia, Pa.
Thermoid Rubber, Division of Thermoid Co., Trenton, N. J.
United States Electric Tool Co., The, Cincinnati, Ohio
Wisconsin Abrasive Co., Milwaukee, Wis.

DRESSERS, Grinding Wheel

Atkins E. C., & Co., Indianapolis, Ind.
Calder Mfg. Co., Lancaster, Pa.
Carboloy Co., Inc., Detroit, Mich. (Emery wheel, diamond impregnated).
Carborundum Co., The, Niagara Falls, N. Y.
Collmer Bros., South Bend, Ind.
Desmond-Stephan Mfg. Co., Urbana, Ohio
Dumore Co., The, Racine, Wis.
Norton Co., Worcester, Mass.
Standard Elec. Tool Co., The, Cincinnati, Ohio
United States Electric Tool Co., The, Cincinnati, Ohio
Vincent Steel Process Co., Detroit, Mich.
Wallen, G. J., Mfg. Co., San Francisco, Calif.
Willey's Carbide Tool Co., Detroit, Mich.
Wisconsin Abrasive Co., Milwaukee, Wis.

DRILL-GRINDING ATTACHMENT

Atlas Press Co., Kalamazoo, Mich.
Cleo Div., Reed Roller Bit Co., Houston, Texas
McBurney, A. D., Los Angeles, Calif.
Millers Falls Co., Greenfield, Mass.
United States Electric Tool Co., The, Cincinnati, Ohio
Standard Elec. Tool Co., The, Cincinnati, Ohio
Strand & Co., N. A., Chicago, Ill.

DRILLS, Blacksmiths'

Buffalo Forge Co., Buffalo, N. Y.
Canedy Otto Mfg. Co., Chicago Heights, Ill.
Champion Blower & Forge Co., Lancaster, Pa.
Chicago Latrobe Twist Drill Works, Chicago, Ill.
Clark Equipment Co., Buchanan, Mich.
Cleveland Twist Drill Co., The, Cleveland, Ohio
Morse Twist Drill and Machine Co., New Bedford, Mass.
National Twist Drill & Tool Co., Rochester, Minn.

Standard Tool Co., Cleveland, Ohio
Union Twist Drill Co., Athol, Mass.
Whitman & Barnes, Detroit, Mich.

DRILLS, Portable Electric

Albertson & Co., Inc., Sioux City, Iowa
Aristo Power Tools, Inc., Chicago, Ill.
Black & Decker Mfg., Co., Towson, Md.
Bradford Machine Tool Co., The, Cincinnati, Ohio
Canedy Otto Mfg. Co., Chicago Heights, Ill.
Chicago Pneumatci Tool Co., New York, N. Y.
Cincinnati Electrical Tool Co., The, Cincinnati, Ohio
Clark, James, Jr., Electric Co., Louisville, Ky.
Dumore Co., The, Racine, Wis.
Duro Metal Products Co., Chicago, Ill.
Gaston Power Tools, Chicago, Ill.
Goodell-Pratt Co., Division of Millers Falls Co., Greenfield, Mass.
Independent Pneumatic Tool Co., Aurora, Ill.
Mall Tool Co., Chicago, Ill.
Millers Falls Co., Greenfield Mass.
Milwaukee Electric Tool Corp., Milwaukee, Wis.
Misener Mfg. Co., Inc., Syracuse, N. Y.
Rotor Tool Co., The, Cleveland, Ohio
Skilsaw, Inc., Chicago, Ill.
Speedway Mfg. Co., Cicero, Ill.
Standard Electrical Tool Co., The, Cincinnati, Ohio
Stanley Electrical Tool Division, The Stanley Works, New Britain, Conn.
Stow Manufacturing Co., Inc., Binghamton, N. Y.
Syntron Company, Homer City, Pa.
United States Electrical Tool Co., The, Cincinnati, Ohio
Van Dorn Electric Tool Co., The, Towson, Md.
Wodack Electric Tool Corp., Chicago, Ill.

DRILLS, Pneumatic

Ace Drill Corp., Detroit, Mich.
Aro Equipment Corp., The, Bryan, Ohio
Chicago Pneumatic Tool Co., New York, N. Y.
Cleveland Pneumatic Tool Co., The, Cleveland, Ohio
Dallett Co., The, Philadelphia, Pa.
Independent Pneumatic Tool Co., Aurora, Ill.
Ingersoll-Rand Co., New York, N. Y.
Keller Tool Co., Grand Haven, Mich.
Quality Tools Corp., New Wilmington, Pa.
Schramm, Inc., West Chester, Pa.
Worthington Pump and Machinery Corp., Harrison, N. J.

DRILLS, Portable Pneumatic

Black & Decker Mfg. Co., The, Towson, Md.
Buckeye Tools Corp., Dayton, Ohio
Chicago Pneumatic Tool Co., New York, N. Y.
Cleo Div., Reed Roller Bit Co., Houston, Tex.
Cleveland Pneumatic Tool Co., The, Cleveland, Ohio
Dallett Co., The, Philadelphia, Pa.
Gardner-Denver Co., Quincy, Ill.
Independent Pneumatic Tool Co., Chicago, Ill.
Rotor Tool Co., The, Cleveland, Ohio
Schramm, Inc., West Chester, Pa.
Van Dorn Tool Co., Towson, Md.

DRILLS, Torch-Tip Cleaning

(See: "Tip-Cleaners")

DRILLS, Twist

Ace Drill Corp., Detroit, Mich.
Ampco Twist Drill Co., Jackson, Mich.
Bay State Tap & Die Co., Mansfield, Mass.
Chicago Latrobe Twist Drill Works, Chicago, Ill.
Cincinnati Tool Co., The, Cincinnati, Ohio
Clark Equipment Co., Buchanan, Mich.
Cleveland Twist Drill Co., The, Cleveland, Ohio
Cogsdill Twist Drill Co., Detroit, Mich.
Greenfield Tap & Die Corp., Greenfield, Mass.
Morse Twist Drill & Machine Co., New Bedford, Mass.
National Twist Drill & Tool Co., Rochester, Minn.
Republic Drill & Tool Co., Chicago, Ill.
Standard Tool Co., Cleveland, Ohio
Stanley Tools, Division of the Stanley Works, New Britain, Conn.
Super Tool Co., Detroit, Mich.
Threadwell Tap & Die Co., Greenfield, Mass.
Union Twist Drill Co., Athol, Mass.
Whitman & Barnes, Detroit, Mich.

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(See: "Collectors, Exhausters and Blower Systems")

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Mine Safety Appliances Co., Pittsburgh, Pa.
Safety Clothing & Equipment Co., Cleveland, Ohio
Standard Safety Equipment Co., Chicago, Ill.
Willson Products, Inc., Reading, Pa.

ELECTRODE CARRIERS

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
American Oxygen Service Corp., Harrison, N. J.
Atlas Welding Accessories Co., Detroit, Mich.
B & H Welders Supplies, Portsmouth, Va.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Ergolyte Mfg. Co., Philadelphia, Pa.
Fibre-Metal Prod. Co., Chester, Pa.
General Electric Co., Schenectady, N. Y.
Hollup Corp., Chicago, Ill.
Industrial Prod. Co., Philadelphia, Pa.
Kimball Safety Prod. Co., Cleveland, Ohio
National Cylinder Gas Co., Chicago, Ill.
S. C. Leather Co., Pittsburgh, Pa.
Safety Clothing & Equip. Co., Cleveland, Ohio
Singer Leather Clothing Co., Philadelphia, Pa.
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Welding Engineering Co., Milwaukee, Wis.
Williams & Co., Inc., Pittsburgh, Pa.

ELECTRODE COATING MATERIALS

(See: "Coating Materials, Electrode")

ELECTRODE HOLDERS

Acme Electric Welder Co., Los Angeles, Cal.
Air Reduction Sales Co., New York, N. Y.
Albert & J. M. Anderson Mfg. Co., S. Boston, Mass.
Allen Electric & Equipment Co., Kalamazoo, Mich.
Allied Weld-Craft, Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wisc.
Allison Tool & Engineering Co., Los Angeles, Calif.
American Agile Corp., Cleveland, Ohio
Arc Welding Supply Co., Bronx, N. Y.
Arco Welder Mfg. Co., Milwaukee, Wisc.
Arcos Corp., Philadelphia, Pa.
Burdett Oxygen Co., Cleveland, Ohio
Chicago Tool & Engineering Co., Chicago, Ill.
Commerce Pattern Foundry & Machine Co., Detroit, Mich.
Craftsweld Equip. Corp., Long Island City, N. Y.
Detroit Electrode Holder Co., Detroit, Mich.
Dockson Corp., Detroit, Mich.
Duro Engineering Co., New Haven, Conn.
Electric Arc, Inc., Newark, N. J.
Ergolyte Mfg. Co., Philadelphia, Pa.
Eutectic Welding Alloys Corp., New York, N. Y.
F. R. Faulk, Pittsburgh, Pa.
Fibre-Metal Prod. Co., The, Chester, Pa.
Flood Safety Products Co., Chicago, Ill.
Garibay Mfg. Co., Montebello, Calif.
Gaso Equipment Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Goss Gas, Inc., Pittsburgh, Pa.
Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.

(Continued on Page 52)

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TWECOTONG Electrode Holders are made in 200, 250, 300 and 500 ampere sizes. Fully insulated, simple, efficient. All parts replaceable. Insulation almost indestructible.

Free TWECOLOG shows Holders, Clamps, Connectors, Terminals and Lugs for Electric Welding. Manufactured by

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MODEL SF-3
replaceable jaw plates

MODEL F-3
jaw plates not replaceable

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Spring—adjustable tension—chrome vanadium steel
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WAGNER MANUFACTURING COMPANY • JACKSON, MISSOURI

ELECTRODE HOLDERS

(Continued from Page 51)

Harnischfeger Corp., Milwaukee, Wisc.
Har-Worth Mfg. Co., Sherwood, Ore.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Industrial Prod. Co., Philadelphia, Pa.
Jackson Products, Warren, Mich.
Lincoln Electric Co., The, Cleveland, Ohio
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Martin Wells, Los Angeles, Calif.
Marquette Mfg. Co., Minneapolis, Minn.
McClary & Byers Equipment Co., Oakland, Calif.
McDonald, B. F., Co., Los Angeles, Calif.
Metal & Thermit Corp., New York, N. Y.
Metro Mfg. Co., Long Island City, N. Y.
Mid-States Equipment Co., Chicago, Ill.
Miller Elec. Mfg. Co., Inc., Appleton, Wis.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Elec. Welding Mach. Co., Bay City, Mich.
Plastic Manufacturing Co., Pasadena, Calif.
Progressive Welder Co., Detroit, Mich.
Pulmosan Safety Equipment Co., Brooklyn, N. Y.
Purdue Mfg. Co., Chicago, Ill.
Randall Mfg. Co., North Kansas City, Mo.
Rasmussen Iron Works, Whittier, Calif.
Resistance Welder Corp., Detroit, Mich.
Smith Corp., A. O., Milwaukee, Wis.
Smith Welding Equipment Corp., Minneapolis, Minn.
Stevens & Co., Inc., C. H., South Norwalk, Conn.
Stoody Co., Whittier, Calif.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Thermex Equipment Co., Detroit, Mich.
Trindl Products Ltd., Chicago, Ill.
Tweco, Products Co., Wichita, Kans.
Universal Power Corp., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
US Electric Welder Corp., Toledo, Ohio
Victor Equipment Co., San Francisco, Calif.
Wagner Mfg. Co., Inc., Jackson, Mo.
Weiger Weed and Co., Div. of Fansteel Metallurgical Corp., Detroit, Mich.
Weldaloy Products Co., Detroit, Mich.
Welding & Cutting Materials Co., North Kansas City, Mo.
Welding Equip. & Supply Co., Detroit, Mich.
Wells, Martin, Los Angeles, Calif.

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Export: Henry John & Son, 7 Water St., N. Y. C.

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Welding Engineering Co., Milwaukee, Wisc.
Westinghouse Elec. Corp., Pittsburgh, Pa.
Williams & Co., Inc., Pittsburgh, Pa.
Will-Weld Mfg. Co., Omaha, Neb.
Wilson Welder & Metals Co., Inc., New York, N. Y.

ELECTRODE HOLDERS, Arc-Oxygen

American Agile Corp., Cleveland, Ohio
Arcos Corp., Philadelphia, Pa.
Chicago Tool & Engineering Co., Chicago, Ill.
Metro Manufacturing Co., Long Island City, N. Y.
Trindl Products Ltd., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

ELECTRODE HOLDERS, Atomic-Hydrogen

Electric Arc, Inc., Newark, N. J.
General Electric Co., Schenectady, N. Y.
Welding Eng. Corp., Milwaukee, Wisc.

ELECTRODE HOLDERS, Carbon

Air Reduction Sales Co., New York, N. Y.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Albert & J. M. Anderson Mfg. Co., Boston, Mass.
American Agile Corp., Cleveland, Ohio
Eisler Engineering Co., Newark, N. J.
Eutectic Welding Alloys Corp., New York, N. Y.
Fibre-Metal Prod. Co., The, Chester, Pa.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Industrial Products Co., Philadelphia, Pa.
K. O. Lee Co., Aberdeen, So. Dakota
Lincoln Electric Co., The, Cleveland, Ohio
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Mid-States Equipment Co., Chicago, Ill.
Miller Elec. Mfg. Co., Inc., Appleton, Wisc.
National Cylinder Gas Co., Chicago, Ill.
Trindl Prod. Ltd., Chicago, Ill.
Tweco Products Co., Wichita, Kans.
Universal Welder Corp., Cleveland, Ohio
US Electric Welder Corp., Toledo, Ohio
Weldex, Inc., Detroit, Mich.
Westinghouse Elec. Corp., Pittsburgh, Pa.
Williams & Co., Inc., Pittsburgh, Pa.

ELECTRODE HOLDERS, Inert-Gas-Shielded

Air Reduction Sales Co., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Hollup Corp., Chicago, Ill.
Linde Air Products Co., The, New York, N. Y.
Victor Equipment Co., San Francisco, Calif.

ELECTRODE HOLDERS, Resistance

Acro Welder Mfg. Co., Milwaukee, Wis.
American Electric Fusion Corp., Chicago, Ill.
Ampco Metal, Inc., Milwaukee, Wisc.
Commerce Pattern Foundry & Machine Co., Detroit, Mich.
Eisler Engineering Co., Inc., Newark, N. J.
Electroloy Co., Inc., Bridgeport, Conn.
Fansteel Metallurgical Corp., N. Chicago, Ill.
Hollup Corp., Chicago, Ill.
Mallory, P. R., & Co., Inc., Indianapolis, Ind.
National Electric Welding Machine Co., Bay City, Mich.
Pier Equipment Mfg. Co., Benton Harbor, Mich.
Progressive Welder Co., Detroit, Mich.
Scott Mfg. Co., Kansas City, Mo.
S-M-S Corp., Detroit, Mich.
Tipaloy, Inc., Detroit, Mich.
Universal Welder Corp., Cleveland, Ohio
Weiger Weed & Co., Div. of Fansteel Metallurgical Corp., Detroit, Mich.
Weldaloy Products Co., Detroit, Mich.
Weldex, Inc., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.
Welding Sales & Engr. Co., Detroit, Mich.

ELECTRODE HOLDERS, Underwater

(See: "Electrode Holders, Arc-Oxygen")

ELECTRODE KITS

(See: "Kits, Electrode")

ELECTRODE-PROCESSING EQUIPMENT

Aufhauser Bros. Corp., New York, N. Y.
Moslo Machinery Co., Cleveland, Ohio

ELECTRODES, Aluminum

Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft, Inc., Indianapolis, Ind.
All State Welding Alloys Co., Inc., White Plains, N. Y.
Aluminum Company of America, Pittsburgh, Pa.
American Agile Corp., Cleveland, Ohio
Arcos Corp., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Burdett Oxygen Co., The, Cleveland, Ohio
Childs Aluminum Solder Co., New York, N. Y.
Ever-Tite Alloys Corp., New York, N. Y.
Eutectic Welding Alloys Co., New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Lincoln Electric Co., The, Cleveland, Ohio
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metal & Thermit Corp., New York, N. Y.
Metro Manufacturing Co., Long Island City, N. Y.
National Cylinder Gas Co., Chicago, Ill.
Phillips, C. E., & Co., Detroit, Mich.
Ragle Industries, Kansas City, Mo.
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(Continued on Page 54)

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Universal Power Corp., Cleveland, Ohio
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Welding Alloys Mfg. Co., Newark, N. J.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder and Metals Co., Inc., New York, N. Y.
Wooldridge Aluminum Welding Products, Inc., Glastonbury, Conn.

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Alloy Rods Co., York, Pa.
All State Welding Alloys Co., Inc., White Plains, N. Y.
American Agile Corp., Cleveland, Ohio
American Brass Co., Waterbury, Conn.
Ampco Metal, Inc., Milwaukee, Wis.
Arcos Corp., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Eutectic Welding Alloys Co., New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
McCauley Alloy Co., Steger, Ill.
Metal & Thermit Corp., New York, N. Y.
Metro Manufacturing Co., Long Island City, N. Y.
National Elec. Welding Mach. Co., Bay City, Mich.
National Electric Welding Machines Co., Bay City, Mich.
Phillips, C. E., Co., Detroit, Mich.
Victor Equipment Co., San Francisco, Calif.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., New York, N.Y.

ELECTRODES, Arc-Oxygen

Arcos Corp., Philadelphia, Pa.
Champion Rivet Co., The, Cleveland, Ohio
Craftsweld Equipment Corp., Long Island City
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Hobart Brothers Co., Troy, Ohio
Lincoln Electric Co., Cleveland, Ohio
Metal & Thermit Corp., New York, N. Y.
Metro Manufacturing Co., Long Island City, N. Y.
Phillips, C. E. & Co., Detroit, Mich.
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Smith Corp., A. O., Milwaukee, Wis.
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Hobart Bros. Co., Troy, O.
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Victor Equipment Co., San Francisco, Calif.
Weldaloy Products Co., Detroit, Mich.

ELECTRODES, Bronze

Air Reduction Sales Co., New York, N. Y.
Akron Bronze & Aluminum Co., Akron, O.
Allied Weld-Craft, Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Alloy Rods Co., York, Pa.
All State Welding Alloys Co., Inc., White Plains, N. Y.
American Arc Welders, Inc., Roseau, Minn.
American Agile Corp., Cleveland, Ohio
American Brass Co., Waterbury, Conn.
Ampco Metal, Inc., Milwaukee, Wis.
Arcos Corp., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Bridgeport Brass Co., Bridgeport, Conn.
Burdett Oxygen Co., Cleveland, Ohio
Central Steel & Wire Co., Chicago, Ill.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Champion Rivet Co., Cleveland, Ohio
Davies & Son, Inc., Los Angeles, Calif.
Eccles & Davies Machinery Co., Inc., Los Angeles, Calif.
Eutectic Welding Alloys Co., New York, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Bros. Co., Troy, O.
Hollup Corp., Chicago, Ill.
Johnston, A. P., Los Angeles, Calif.
Lincoln Electric Co., The, Cleveland, Ohio
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
McCauley Alloy Co., Steger, Ill.
Metal & Thermit Corp., New York, N. Y.
Metro Manufacturing Co., Long Island City, N. Y.

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Welding Equipment & Supply Co., Detroit, Mich.
Welding Service Sales, Inc., San Francisco, Calif.
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Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., New York, N. Y.

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Air Reduction Sales Co., New York City
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American Agile Corp., Cleveland, Ohio
Becker Bros. Carbon Co., Cicero, Ill.
Borm Manufacturing Co., Elgin, Ill.
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Eutectic Welding Alloys Corp., New York, N. Y.
Hobart Bros. Co., Troy, O.
Hollup Corp., Chicago, Ill.
Lincoln Electric Co., The, Cleveland, Ohio
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Mfg. Co., Long Island City, N. Y.
National Carbon Co., Inc., New York, N. Y.
Ohio Carbon Co., The, Cleveland, Ohio
Phillips, C. E. & Co., Detroit, Mich.
Pure Carbon Co., St. Marys, Pa.
Smith, A. O., Corp., Milwaukee, Wis.
Speer Carbon Co., St. Marys, Pa.
Stackpole Carbon Co., St. Marys, Pa.
Steel Sales Corp., Chicago, Ill.
Trindl Products Ltd., Chicago, Ill.
Universal Power Corp., Cleveland, Ohio
Westinghouse Elec. Corp., Pittsburgh, Pa.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., New York, N. Y.

ELECTRODES, Cast-Iron Welding

Air Reduction Sales Co., New York, N. Y.
Allis-Chalmers Mfg. Co., Milwaukee, Wisc.
Allied Weld-Craft Inc., Indianapolis, Ind.
Alloy Rods Co., York, Pa.
All State Welding Alloys Co., White Plains, N. Y.
American Agile Corp., Cleveland, Ohio
American Arc Welders, Inc., Roseau, Minn.
Ampco Metal, Inc., Milwaukee, Wisc.
Anthony Carlin Co., The, Cleveland, Ohio
Arcos Corporation, Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Atlas Foundry Co., Irvington, N. J.
Burdett Oxygen Co., Cleveland, Ohio
Central Steel & Wire Co., Chicago, Ill.
Champion Rivet Co., The, Cleveland, Ohio
Chicago Hardware Foundry Co., The, North Chicago, Ill.
Crucible Steel Co. of America, New York, N. Y.
Ever-Tite Alloys Corp., New York, N. Y.
Eutectic Welding Alloys Co., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wisc.
Hobart Bros. Co., Troy, Ohio

(Continued on Page 56)

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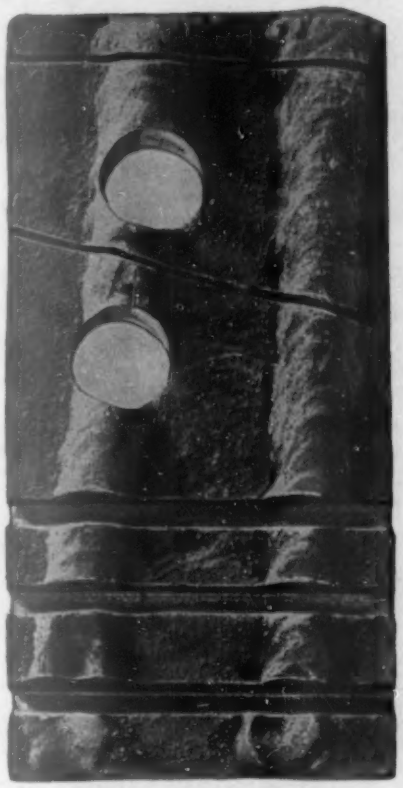

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(Continued from Page 55)

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Larkin Lectro Products Co., New York, N. Y.
Lincoln Electric Co., The, Cleveland, Ohio
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metal & Thermit Corp., New York, N. Y.
Metro Manufacturing Co., Long Island City, N. Y.
McKay Co., Pittsburgh, Pa.
Miller Electric Mfg. Co., Richmond, Ind.
National Carbon Co., Inc., Cleveland, Ohio
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
North American Philips Co., Inc., New York, N. Y.
Northeast Metals Co., Philadelphia, Pa.
Page Steel & Wire Div., American Chain & Cable Co., Inc., Monessen, Pa.
Phillips, C. E., & Co., Detroit, Mich.
Reid-Avery Co., Dundalk, Baltimore, Md.
Resisto-Loy Company, S. W., Grand Rapids, Mich.
Shober Sales, Inc., Stockton, Calif.
Smith Corp., A. O., Milwaukee, Wisc.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
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Standard Steel & Wire Co., Bolivar, Pa.
Steel Sales Corp., Chicago, Ill.
Universal Power Corp., Cleveland, Ohio
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Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., New York, N. Y.

ELECTRODES, Copper

Air Reduction Sales Co., New York, N. Y.
Akron Bronze & Aluminum Co., Akron, O.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Agile Corp., Cleveland, Ohio
American Arc Welders, Inc., Roseau, Minn.
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Ampco Metal, Inc., Milwaukee, Wis.
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Steel Sales Corp., Chicago, Ill.
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American Manganese Steel Div. of American Brake Shoe Co., Chicago Heights, Ill.
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Bingrod Co., Kalamazoo, Mich.
Burdett Oxygen Co., The, Cleveland, Ohio
Callite Tungsten Corporation, Union City, N. J.
Central Steel & Wire Co., Chicago, Ill.
Champion Rivet Co., The, Cleveland, Ohio
Chicago Hardware Foundry Co., North Chicago, Ill.
Cleveland Tungsten Inc., Cleveland, Ohio
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Deloy Metals, Philadelphia, Pa.
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General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wisc.
Haynes Stellite Co., New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Hoskins Mfg. Co., Detroit, Mich.
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McDonald Co., E. J., The, Reno, Nev.
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Metal & Thermit Corp., New York, N. Y.
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(Continued on Page 58)

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for Hardfacing, Build-Up and Repairing

The Amsco welding rods and electrodes listed below are designed solely for repairing, rebuilding and hardfacing of ferrous equipment parts. Rolled or drawn electrodes are coated by extrusion, the coating being concentric with the core wire and uniform in thickness from end to end. Cast rods are machine dip coated. For a full list of applications, write for Amsco Bulletin 1047-W.

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MANG-CO—composite electrode with carbon steel core and manganese compounds and other alloys in the coatings. Tough and abrasion resistant. Work hardens to 400-500 BHN.

NUMBER 459—Cast hardfacing welding rods and electrodes. For severe abrasion resistance (but moderate impact) . . . in pug mill knives, mixer blades, brick dies, scraper and shredder knives, drag chain links, pulverizer hammers, sand pumps. Weld deposits, 500-600 BHN.

NUMBER 217—Cast alloy hardfacing welding rods and electrodes. For severe abrasion resistance (but moderate impact) and moderate high temperature resistance . . . in non-cooled rolling mill guides, carbon scrapers, stoker screws, clinker conveyors, 3rd rail shoes. Smooth weld of 600-700 BHN.

FARMFACE—cast alloy welding rods and electrodes. For heavy abrasion . . . in plow shares, cultivator spades, corn planter runners, plow discs, corn cob crusher rolls, cylinder teeth. Weld deposits, 500-600 BHN.

NI-HARD—cast alloy welding rods and electrodes. For hardfacing against abrasive materials . . . in conveyors, clay extruding dies, crusher rolls, sandslinger cups, clamshells, muller tires. Weld deposits, 500-600 BHN.

ECONOMY HARDFACE—rolled, cold drawn alloy welding rods and electrodes. For combined abrasion and impact resistance . . . in dipper teeth, cams, rollers, screws, rough gears, sprocket wheels, bulldozer tips, road plows, friction clutches, log haul chains. Weld deposit, 450-550 BHN. Self hardening. May be forged and air cooled without loss of hardness.

RESISTWEAR—low-cost, composite alloy electrodes. For heavy abrasion . . . in quarry conveyors, classifier screens, muller tires, carbon steel sprockets. May be used on any ferrous metal. Weld deposits, 400-500 BHN.

NUMBER 1 and NUMBER 6—cast non-ferrous alloy welding rods and electrodes. For corrosion at all temperatures, abrasion at high temperatures.

No. 1—for screws for hot ashes, charging rams, wet ash centrifugal pumps, rolling mill guides, lathe centers, gudgeon pin bearings. Weld deposits, 426-450 BHN at 1000° F., 380-393 BHN at 1200° F.

No. 6—for blanking, shearing, forming and hot trimming dies, flying shears, auto and aircraft exhaust valve seats, locomotive valve gears. Weld deposits, 297-306 BHN at 1000° F., 260-270 BHN at 1200° F.

DIEWELD—alloy welding rods and electrodes. For tools and dies . . . punches, shear knives, chisels, reamers. Air hardening as deposited (500-600 BHN). May be softened through proper heat treatment for machining, and rehardened.

TOOLFACE—tough, super-hard high speed steel alloy welding rods and electrodes. For composite cutting tools . . . on lathes, shapers, millers . . . shear blades, wire straightening rolls, clutch fingers, keyways. Weld deposits, 575-675 BHN. Can be readily dressed.

MACHINE-FACE—low-cost extruded alloy electrodes in coated form only. For surfacing ferrous parts that must be later ground and machined. Weld deposits, 293-331 BHN. After machining, weld may be flame hardened (with S.A.E. 4140 steel quench) to 461-534 BHN.

RAIL-FACE—composite coated alloy electrodes. For high impact and abrasion resistance . . . on carbon steel rail ends, frogs and crossings. Gives flat weld deposit of 325-350 BHN without porosity or cracks requiring minimum grinding.

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ELECTRODES, Hard-Facing

(Continued from Page 56

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Reid-Avery Co., Dundalk, Baltimore, Md.
Resisto-Loy Co., Grand Rapids, Mich.
Sight Feed Generator Co., The, Richmond, Ind.
Smith Corp., A. O., Milwaukee, Wisc.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Standard Steel & Wire Co., Bolivar, Pa.
Steel Sales Corp., Chicago, Ill.
Stoody Co., Whittier, Calif.
Stulz-Sickles Co., Newark, N. J.
Universal Power Corp., Cleveland, Ohio
U. S. Steel Supply Co., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Wall Colmonoy Corp., Detroit, Mich.
Weldaloy Products Co., Detroit, Mich.
Westinghouse Elec. Corp., Pittsburgh, Pa.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., New York, N. Y.

ELECTRODES, Heat-Resisting

Air Reduction Sales Co., New York, N. Y.
Allegheny Ludlum Steel Corp., Brackenridge, Pa.
Allied Weld-Craft Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wisc.
Alloy Rods Co., York, Pa.
American Managanese Steel Div. of American Brake Shoe Co., Chicago Heights, Ill.
Arcos Corp., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Burgess-Parr Co., Freeport, Ill.
Central Steel & Wire Co., Chicago, Ill.
Champion Rivet Co., The, Cleveland, Ohio
Cleveland Tungsten, Inc., Cleveland, Ohio
Coast Metals, Inc., Canton, Ohio
Crucible Steel Co., of America, New York, N. Y.
Delloy Metals, Philadelphia, Pa.
Eutectic Welding Alloys Corp., New York, N. Y.
Ever-Tite Alloys Corp., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wisc.
Haynes Stellite Co., New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Hoskins Mfg. Co., Detroit, Mich.
Johnston, A. P., Los Angeles, Calif.
Lincoln Electric Co., The, Cleveland, Ohio
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Maurath Inc., Cleveland, Ohio
McKay Co., Pittsburgh, Pa.
Metal & Thermit Corp., New York, N. Y.
Michigan Steel Casting Co., Detroit, Mich.
National Cylinder Gas Co., Chicago, Ill.
Page Steel & Wire Div. of American Chain & Cable Co., Inc., Monessen, Pa.
Phillips, C. E., & Co., Detroit, Mich.
Reid-Avery Co., Dundalk, Baltimore, Md.
Resisto-Loy Co., Grand Rapids, Mich.
Smith Corp., A. O., Milwaukee, Wisc.
Steel Sales Corp., Chicago, Ill.
Stoody Co., Whittier, Cal.
U. S. Steel Supply Co., Chicago, Ill.
Victor Equipment Co. San Francisco, Calif.
Wall Colmonoy Corp., Detroit, Mich.
Welding Equipment & Supply Co., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder and Metals Co., New York, N. Y.

ELECTRODES, High-Tensile

Air Reduction Sales Co., New York, N. Y.
Allied Weldcraft, Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wisc.
Alloy Rods Co., York, Pa.
American Agile Corp., Cleveland, Ohio
Arcos Corp., Philadelphia, Pa.
Anthony Carlin Co., Cleveland, Ohio
Arc Welding Supply Co., Bronx, N. Y.
Castle A. M. & Co., Chicago, Ill.
Central Steel & Wire Co., Chicago, Ill.
Champion Rivet Co., The, Cleveland, Ohio
Chicago Steel & Wire Co., Chicago, Ill.
Eutectic Welding Alloys Corp., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Graybar Electric Co., New York, N. Y.
Harnischfeger Corp., Milwaukee, Wisc.
Haynes Stellite Co., New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
R. G. LeTourneau, Inc., Peoria, Ill.
Lincoln Electric Co., The, Cleveland, Ohio
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
McKay Co., Pittsburgh, Pa.
Metal & Thermit Corp., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Electric Welding Mach. Co., Bay City, Mich.
National Welders Supply Co., Charlotte, N. C.
North American Philips Co., Inc., New York, N. Y.
Page Steel & Wire Div., American Chain & Cable Co., Monessen, Pa.
Phillips, C. E., & Co., Detroit, Mich.
Reid-Avery Co., Dundalk, Baltimore, Md.
Resisto-Loy Co., Grand Rapids, Mich.
Smith, A. O., Corp., Milwukee, Wisc.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Standard Steel & Wire Co., Bolivar, Pa.
Steel Sales Corp., Chicago, Ill.
Trindl Products Ltd., Chicago, Ill.
United States Steel Supply Co., Chicago, Ill.
Universal Power Corp., Cleveland, Ohio
Westinghouse Elec. Corp., Pittsburgh, Pa.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., New York, N. Y.

ELECTRODES, Inconel

Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft, Inc., Indianopolis, Ind.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
Arcos Corporation, Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Eutectic Welding Alloys Company, New York, N. Y.
Hobart Brothers Co., Troy, Ohio
Holden, A. F., Co., The, New Haven, Conn.
Hollup Corp., Chicago, Ill.
International Nickel Co., Inc., New York, N. Y.
Johnston, A. P., Los Angeles, Calif.
Marquette Mfg. Co., Minneapolis, Minn.
Maurath Inc., Cleveland, Ohio
McKay Co., The, Pittsburgh, Pa.
National Cylinder Gas Co., Chicago, Ill.
Phillips, C. E. & Co., Detroit, Mich.
Reid-Avery Co., Baltimore, Md.
Steel Sales Corp., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Williams & Co., Inc., Pittsburgh, Pa.

ELECTRODES, Lime-Ferritic

(See: "ELECTRODES, Low Hydrogen")

American Agile Corp., Cleveland, Ohio
Arcos Corp., Philadelphia, Pa.
Eutectic Welding Alloys Corp., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wisc.
Hobart Brothers Co., Troy, Ohio
Lincoln Electric Co., Cleveland, Ohio
McKay Co., The, Pittsburgh, Pa.
North American Philips Co., Inc., Detroit, Mich.
Page Steel & Wire Division of American Chain & Cable Co., Inc., Monessen, Pa.
Phillips, C. E., & Co., Detroit, Mich.
Reid-Avery Co., Dundalk, Baltimore, Md.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., Inc., New York, N. Y.

ELECTRODES, Low Hydrogen

Allis-Chalmers Mfg. Co., Milwaukee, Wisc.
Alloy Rods Co., York, Pa.
Arcos Corp., Philadelphia, Pa.
Champion Rivet Co., The, Cleveland, Ohio
Hobart Brothers Co., Troy, Ohio
Lincoln Electric Co., Cleveland, Ohio
McKay Co., The, Pittsburgh, Pa.
Metal & Thermit Corp., New York, N. Y.
Reid-Avery Co., Dundalk, Baltimore, Md.
Smith Corp., A. O., Milwaukee, Wisc.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., Inc., New York, N. Y.

ELECTRODES, Manganese-Bronze

Allied Weld Craft, Inc., Indianapolis, Ind.
American Agile Corp., Cleveland, Ohio
American Brass Co., The, Waterbury, Conn.
Central Steel and Wire Co., Chicago, Ill.
Champion Rivet Co., The, Cleveland, Ohio
Eutectic Welding Alloys Corp., New York, N. Y.
Hobart Brothers Co., Troy, Ohio
Marquette Mfg. Co., Inc., Minneapolis, Minn.
National Cylinder Gas Co., Chicago, Ill.
National Elec. Welding Mach. Co., Bay City, Mich.
Phillips, C. E., & Co., Detroit, Mich.
Steel Sales Corp., Chicago, Ill.

ELECTRODES, Monel

Air Reduction Sales Co., New York, N. Y.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Agile Corp., Cleveland, Ohio
Arcos Corp., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Eutectic Welding Alloys Company, New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
International Nickel Co., Inc., New York, N. Y.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
National Cylinder Gas Co., Chicago, Ill.
Northeast Metals Co., Philadelphia, Pa.
Phillips, C. E., & Company, Detroit, Mich.
Reid-Avery Sales Co., Baltimore Md.
Steel Sales Corp., Chicago, Ill.
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., Inc., New York, N. Y.

ELECTRODES, Nickel

Air Reduction Sales Co., New York, N. Y.
All-State Welding Alloys Co., White Plains, N. Y.
Alloy Rods Co., York, Pa.
American Agile Corp., Cleveland, Ohio
Arcos Corp., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Central Steel and Wire Co., Chicago, Ill.
Champion Rivet Co., The, Cleveland, Ohio
Crucible Steel Co. of America, New York, N. Y.
Eutectic Welding Alloys Co., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Haynes Stellite Co., New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Holden, A. F., Co., The, New Haven, Conn.
Hollup Corp., Chicago, Ill.
Hoskins Mfg. Co., Detroit, Mich.
International Nickel Co., Inc., New York, N. Y.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metal & Thermit Corp., New York, N. Y.
Metallizing Engineering Co., Inc., Long Island City, N. Y.
Phillips, C. E., & Co., Detroit, Mich.
Reid-Avery Co., Baltimore Md.
Steel Sales Corp., Chicago, Ill.
Standard Steel & Wire Co., Bolivar, Pa.
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Welding Equipment & Supply Co., Detroit, Mich.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., Inc., New York, N. Y.

ELECTRODES, Nickel Manganese

Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft, Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wisc.
Alloy Rods Co., York, Pa.
American Agile Corp., Cleveland, Ohio
American Manganese Steel Div. of American Brake Shoe Co., Chicago Heights, Ill.
Arcos Corp., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Burdett Oxygen Co., The, Cleveland, Ohio
Central Steel & Wire Co., Chicago, Ill.
Champion Rivet Co., The, Cleveland, Ohio
Eutectic Welding Alloys Co., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wisc.
Haynes Stellite Co., New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Hoskins Mfg. Co., Detroit, Mich.
Lincoln Elec. Co., The, Cleveland, Ohio
Manganese Steel Forge Co., Philadelphia, Pa. (Manganese only.)
Marquette Mfg. Co., Inc., Minneapolis, Minn.
McKay Co., The, Pittsbugh, Pa.
Metal & Thermit Corp., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.

Page Steel and Wire Div., American Chain & Cable Co., Monessen, Pa.
Phillips, C. E., & Co., Detroit, Mich.
Reid-Avery Co., Dundalk, Baltimore, Md.
Resisto-Loy Co., Grand Rapids, Mich.
Smith Corp., A. O., Milwaukee, Wis.
Standard Electrode & Mfg. Co., Philadelphia, Pa.
Standard Steel & Wire Co., Bolivar, Pa.
Steel Sales Corp., Chicago, Ill.
Stoody Co., Whittier, Cal.
Stulz-Sickles Co., Newark, N. J.
Taylor-Wharton Iron & Steel Co., High Bridge, N. J.
Taylor-Winfield Corp., The, Warren, Ohio
Universal Power Corp., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Welding Service Sales Inc., San Francisco, Calif.
Westinghouse Electric Corp., Pittsburgh, Pa.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., New York, N. Y.

ELECTRODES, Resistance-Welding

(See: "ELECTRODES, SEAM-WELDING," "ELECTRODES, SPOT-WELDING and "DIES, PROJECTION-WELDING")

ELECTRODES, Seam-Welding

Acme Electric Welder Co., Los Angeles, Calif.
Ampco Metal, Inc., Milwaukee, Wis.
Arco Welder Mfg. Co., Milwaukee, Wisc.
Callite Tungsten Corp., Union City, N. J.
Cleveland Tungsten, Inc., Cleveland, Ohio
Page Steel & Wire Division of American Chain & Cable Co., Inc., Monessen, Pa.
Commerce Pattern Foundry & Machine Co., Detroit, Mich.
Electroloy Co., Inc., The, Bridgeport, Conn.
Eisler Engineering Co., Newark, N. J.
Fansteel Metallurgical Corp., N. Chicago, Ill.
Federal Machine & Welder Co., Warren, Ohio
Mallory & Co., Inc., P. R., Indianapolis, Ind.
National Electric Welding Machines Co., Bay City, Mich.
Progressive Welder Co., Detroit, Mich.
Resistance Welder Corp., Detroit, Mich.
S-M-S Corp., Detroit, Mich.
Swift Electric Welder Co., Detroit, Mich.
Tipaloy, Inc., Detroit, Mich.
Weldex, Inc., Detroit, Mich.
Weiger Weed & Co., Div. of Fansteel Metallurgical Corp., Detroit, Mich.
Weldaloy Products Co., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.
Welding Sales & Engr. Co., Detroit, Mich.

ELECTRODES, Spot-Welding

American Electric Fusion Corp., Chicago, Ill.
Ames Spot Welder Co., Inc., Brooklyn, N. Y.
Ampco Metal Inc., Milwaukee, Wis.
Arco Welder Mfg. Co., Milwaukee, Wisc.
Armstrong Cork Co., Lancaster, Pa.
Callite Tungsten Corp., Union City, N. J.
Cleveland Tungsten Inc., Cleveland, Ohio
Commerce Pattern Foundry & Machine Co., Detroit, Mich.
Eisler Engineering Co., Newark, N. J.
Electroloy Co., Inc., The, Bridgeport, Conn.
Fansteel Metallurgical Corp., N. Chicago, Ill.
Federal Machine & Welder Co., Warren, Ohio
Mallory & Co., Inc., P. R., Indianapolis, Ind.
National Electric Welding Machines Co., Bay City, Mich.
Pier Equip. Mfg. Co., Benton Harbor, Mich.
Progressive Welder Co., Detroit, Mich.
Resistance Welder Corp., Detroit, Mich.
S-M-S Corp., Detroit, Mich.

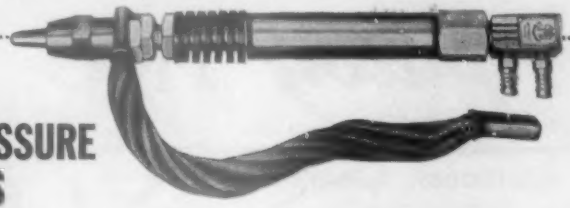
(Continued on page 60)

SPECIALIZED

METALS SERVICE

"UNUSUAL ALLOYS FOR UNUSUAL APPLICATIONS"

Manufacturers of resistance welding electrodes of all commercially required types and sizes—such as replaceable Morse taper and Free Release tapers, seam welder wheels, flash and projection welder dies, electrically upset riveting electrodes, special non-ferrous alloy castings and forgings. Also, gun welder yokes, special welder machine high strength and conductive arms, bearings, etc.



S-M-S ADJUST-A-PRESSURE HOLDERS

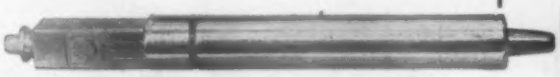
(LOW INERTIA)

Designed for heavy duty requirements. The electrical current is conducted from the welder machine arm through heavy flexible cables. The preloaded pressure holder (stainless steel body) is electrically insulated from the machine arm so that there can be no damage to the spring mechanism. Available in 1¼" and 1½" diameter barrel sizes. Can be used for multiple spot or projection welding when used as an individually sprung holder.

For spot and projection welding of light gauge non-ferrous metals having narrow plastic ranges (yellow brass, red brass, aluminum etc.).

The Low Inertia feature can be obtained on welding machines normally having heavy and bulky moving members. By the same token, low pressures can be obtained where the ordinary pressure system on large welding machines is not low enough for the job at hand. All of this by use of these holders with present installed equipment.

Also used for cross wire welding of non-ferrous metals, etc. etc.



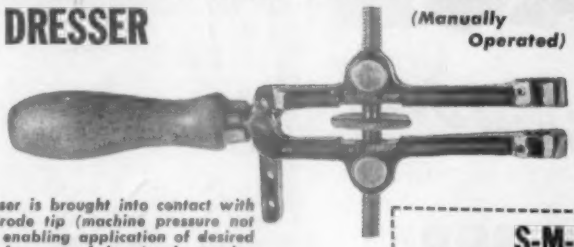
A hammer blow quickly removes the replaceable electrode from the holder without damage to the holder seat—no electrical pitting.

S-M-S EJECTOR HOLDER

(Straight and Offset)

S-M-S ADJUST-A-PRESSURE ELECTRODE TIP DRESSER

(Manually Operated)



The dresser is brought into contact with the electrode tip (machine pressure not utilized) enabling application of desired pressure for ease of dressing by turning the thumb screw. Electrode tip spacing from 1" to 4"—removable for change of face contours, etc.

COMING SOON

- S-M-S ADJUST-A-PRESSURE ELECTRODE TIP DRESSER *(Mechanically operated).*
- S-M-S FILE DRESSER *(Manually operated).*

We are prepared to render service in any alloy requirement in the Resistance Welder Alloy field.

S-M-S ADJUST-A-COLD HOLDERS

(Straight and Offset)

The circulating tube of S-M-S Holders is telescopic—ample adjustment for any conventional depth of drilling. Both ends of the circulating tube are cut on a bias preventing water cut-off in any position. This enables the circulating tube to be extended to the full drilled depth of the tip and effectively circulating the cooling at the essential area. This procedure is one of the most important in gaining maximum electrode tip life.

S-M-S CORPORATION

1165 HARPER AVENUE DETROIT 11, MICHIGAN

Tipaloy for many MORE WELDS per electrode

TIPALOY has proved itself superior in countless operations of resistance welding. Engineers report consistently better performance . . . less redressing and replacement time out, less man-hours lost . . . greater continuous service.

TIPALOY will deliver up to *30% more efficiency* . . . reduce welding costs with *many more welds per electrode.*

TIPALOY'S range of alloys is adaptable for castings . . . forgings . . . butt-welding jaws . . . discs . . . seam-welding wheels . . . spot-welding tips . . . welding machine arms, etc.

There is no premium for TIPALOY metals. Priced competitively with other resistance electrodes, they represent distinct savings for anyone engaged in spot, seams, or butt welding. • *Let us send you more facts* •

Tipaloy INC. 1435 East Milwaukee Ave. DETROIT 11, MICHIGAN

• *Representatives in principal cities* • A few protected territories still open.

ELECTRODES, Spot-Welding

(Continued from Page 59)

Swift Electric Welder Co., Detroit, Mich.
Tipaloy, Inc., Detroit, Mich.
Universal Power Corp., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Weiger Weed & Co., Div. of Fansteel Metallurgical Corp., Detroit, Mich.
Weldaloy Products Co., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.
Welding Sales & Engr. Co., Detroit, Mich.

ELECTRODES, Spot-Welding Refrigerated

Acme Electric Welder Co., Los Angeles, Calif.
Arco Welder Mfg. Co., Milwaukee, Wis.
Ampco Metal, Inc., Milwaukee Wis.
Cleveland Tungsten, Inc., Cleveland, Ohio
Electroloy Co., Inc., Bridgeport, Conn.
Fansteel Metallurgical Corp., N. Chicago, Ill.

PAGE

Stainless Steel

ELECTRODES

PAGE has specialized in Stainless Steel since its earliest development—today offers a complete line of Stainless Steel Electrodes. If you are welding Stainless—*Get in Touch with Your Page Distributor.*

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AMERICAN CHAIN & CABLE

In Business for Your Safety

FrostRode Products, Detroit, Mich.
Mallory & Co., Inc., P. R., Indianapolis, Ind.
Progressive Welder Co., Detroit, Mich.
S-M-S Corp., Detroit, Mich.
Sciaky Bros., Chicago, Ill.
Taylor-Winfield Corp., The, Warren, Ohio
Universal Welder Corp., Cleveland, Ohio
Weiger Weed & Co., Div. of Fansteel Metallurgical Corp., Detroit, Mich.
Weldaloy Products Co., Detroit, Mich.
Weldex, Inc., Detroit, Mich.

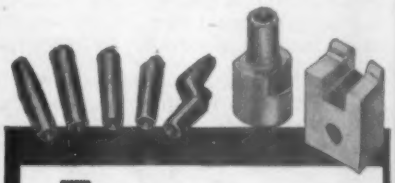
ELECTRODES, Stainless-Steel

Air Reduction Sales Co., New York, N. Y.
Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
Allied Weldcraft, Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wisc.
Alloy Rods Co., York, Pa.
All State Welding Alloys Co., White Plains, N. Y.
American Agile Corp., Cleveland, Ohio
American Manganese Steel Div. of American Brake Shoe Co., Chicago Heights, Ill.
Arcos Corp., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Burdett Oxygen Co., The, Cleveland, Ohio
Castel, A. M. & Co., Chicago, Ill.
Central Steel & Wire Co., Chicago, Ill.
Champion Rivet Co., The, Cleveland, Ohio
Chicago Steel & Wire Co., Chicago, Ill.
Commerce Pattern Foundry & Machine Co., Detroit, Mich.
Crucible Steel Co. of America, New York, N. Y.
Eutectic Welding Alloys Corp., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wisc.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Jessop Steel Co., Washington, Pa.
Johnston, A. P., Los Angeles, Calif.
Lincoln Electric Co., The, Cleveland, Ohio
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Mallory, P. R. & Co., Inc., Indianapolis, Ind.
Manganese Steel Forge Co., Philadelphia, Pa.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Maurath Inc., Cleveland, Ohio
McCauley Alloy Sales Co., Chicago, Ill.
McKay Co., Pittsburgh, Pa.
Metal & Thermit Corp., New York, N. Y.
Metro Manufacturing Co., Long Island City, N. Y.
Michigan Steel Castings Co., Detroit, Mich.
National Cylinder Gas Co., Chicago, Ill.
Page Steel & Wire Div., American Chain & Cable Co., Inc., Monessen, Pa.
Phillips, C. E., & Co., Detroit, Mich.
Reid-Avery Co., Baltimore, Md.
Resistance Welder Corp., Detroit, Mich.
Joseph T. Ryerson & Son Inc., Chicago, Ill.
Smith Corp., A. O., Milwaukee, Wisc.
Shober Sales, Inc., Stockton, Calif.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Steel Sales Corp., Chicago, Ill.
Temprite Products Corp., Detroit, Mich.
Universal Power Corp., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Weldaloy Products Co., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., New York, N. Y.

ELECTRODES, Steel, Mild

Air Reduction Sales Co., New York, N. Y.
Allied Weldcraft, Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Alloy Rods Co., York, Pa.
American Agile Corp., Cleveland, Ohio
American Oxygen Service Corp., Harrison, N. J.
Arcos Corp., Philadelphia
Anthony Carlin Co., Cleveland, Ohio
Arc Welding Supply Co., Bronx, N. Y.
Armco Steel Corp., Middletown, Ohio
Borm Manufacturing Co., Elgin, Ill.
Burdett Oxygen Co., The, Cleveland, Ohio

(Continued on Page 62)



THESE nine superior alloys are made to exacting specifications, and conform to the standards of the Resistance Welder Manufacturers Association, to give you a maximum of service at the lowest possible cost.

TUFFALOY

RESISTANCE WELDING ALLOYS

TIPS • FORGINGS • DIES
BAR STOCK • CASTINGS
SEAM WELDER WHEELS
TUBE MILL WHEELS

Write for Tuffaloy bulletin. It gives you the latest RWMA standards and recommendations, and shows how well the Tuffaloys fit in to take care of all your resistance welding needs.

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and engineering company
8750 GRINNELL AVENUE, DETROIT 13, MICH.

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Resistance Welding Alloys
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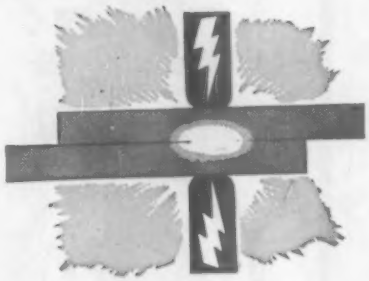
and
Die Designs



The new 44-page Mallory Resistance Welding Catalog for 1948 gives complete working data on the entire Mallory line—alloys, tips, holders, dies and fixtures. Send for your copy today.

Metals and Alloys

Since pioneering the first high production resistance welding alloys with the introduction of Elkonite back in 1926, Mallory has developed the most complete range of metals and alloys to meet the special problems offered by the diversified nature of today's work. Mallory can recommend the correct material for your job from the following—Mallory 3—Elkaloy A—Mallory 22—Mallory 53-B—Mallory 53-Z—Mallory 73—Mallory 100—Elkaloy D—Elkonites.

Tips and Holders

Through standardization of many former "special" items, the Mallory line of tips and holders has produced an ever-increasing series of combinations now available from stock. Such standard combinations frequently save the time and expense that would be involved in specially designed tip-and-holder set-ups.

Dies and Fixtures

Many years of successful experience in designing and manufacturing Flash, Butt and Projection welding dies and fixtures, plus the complete working range covered by Mallory metals and alloys, enables Mallory to serve you with speed and efficiency on any problem requiring special die design.

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THE PIONEERS OF ELKONITE*, ELKALOY A*, MALLORY 3*, MALLORY 53-B and MALLORY 100 METALS.

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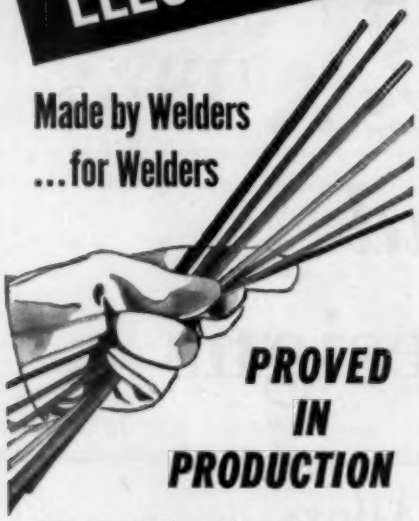

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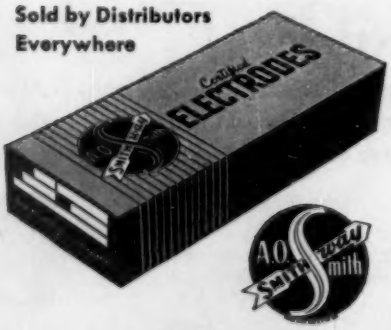

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(Continued on Page 64)

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S-M-S Corporation, Detroit, Mich.
Southern Oxygen Co., Inc., Washington, D. C.
Standard Safety Equipment Co., Chicago, Ill.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Universal Power Corp., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Weldit, Inc., Detroit, Mich.
Welding Engineering Co., Milwaukee, Wis.
Welsh Mfg. Co., Providence, R. I.
Whitehead Metal Products Co., Inc., New York, N. Y.
Willson Products, Inc., Reading, Pa.

FACE SHIELDS, Welding Inspection

American Optical Co., Southbridge, Mass.
Arc Welding Supply Co., Bronx, N. Y.
Boyer-Campbell Co., The, Detroit, Mich.
Burdett Oxygen Co., Cleveland, Ohio
Chicago Eyeshield Co., Chicago, Ill.
Dockson Corp., Detroit, Mich.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Eutectic Welding Alloys Corp., New York, N. Y.
Fibre-Metal Products Co., The, Chester, Pa.
Flood Safety Products Co., Chicago, Ill.
General Scientific Equip. Co., Philadelphia, Pa.
Industrial Products Co., Philadelphia, Pa.
Kedman Co., Salt Lake City, Utah
Lincoln Electric Co., The, Cleveland, Ohio
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Manufacturing Co., Long Island City, N. Y.
Sellstrom Mfg. Co., Chicago, Ill.
Standard Safety Equip. Co., Chicago, Ill.
Tillman & Co., John, Long Beach, Calif.
Universal Welder Corp., Cleveland, Ohio
Williams & Co., Inc., Pittsburgh, Pa.
Willson Products, Inc., Reading, Pa.

FANS, Exhaust

American Mach. & Metals, Inc., East Moline, Ill.
Autovent Fan & Blower Div. The Herman Nelson Corp., Chicago, Ill.
Buffalo Forge Co., Buffalo, N. Y.
Champion Blower and Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Irvington, N. J.
Clarage Fan Co., Kalamazoo, Mich.
Connecticut Blower Co., Hartford, Conn.
Continental Gin Co., Industrial Division, Birmingham, Ala.
Coppus Engineering Corp., Worcester, Mass.
De Vilbiss Co., The, Toledo, Ohio
Eagle-Picher Co., The, Cincinnati, Ohio
Electric Blower Co., Boston, Mass.
Elliott Mfg. Co., Binghamton, N. Y.
Emerson Electric Mfg. Co., The, St. Louis, Mo.
General Blower Co., Morton Grove, Ill.
Ilg Electric Ventilating Co., Chicago, Ill.
Jeffrey Mfg. Co., The, Columbus, Ohio
Kellogg Division of the American Brake Shoe Co., Rochester, N. Y.
MacLeod Co., The, Cincinnati, Ohio
Paasche Airbrush Co., Chicago, Ill.
Powermatic Ventilator Co., Cleveland, Ohio
Robbins & Myers, Inc., Sprinfield, Ohio
Ripley Co., Inc., Middletown, Conn.
Sturtevant, B. F., Co., Division of Westinghouse Electric, Hyde Park, Boston, Mass.
Torit Manufacturing Co., St. Paul, Minn.
Trane Co., The, La Crosse, Wisc.
United Blower Co., Inc., New York, N. Y.
Victor Electric Products, Inc., Cincinnati, Ohio
Wagner Electric Corp., St. Louis, Mo.
Westinghouse Electric Corp., East Pittsburgh, Pa.

FEEDERS, ROD, Automatic

Aufhauser Bros. Corp., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Linde Air Products Co., The, New York, N. Y.
Lincoln Electric Co., Cleveland, Ohio
Moslo Machinery Co., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.

FIBRE, Sheets and Tubes

Fibre-Metal Products Co., The, Chester, Pa.
Flood Safety Products Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Lincoln Electric Co., The, Cleveland, Ohio
Sellstrom Mfg. Co., Chicago, Ill.
Owens-Corning Fiberglas Corp., Toledo, Ohio
Quaker Rubber Corp., Phialdelphia, Pa.
Westinghouse Electric Corp., Pittsburgh, Pa.
Wilmington Fibre Specialty Co., Wilmington, Del.

FILES, American Pattern (Hand)

American Swiss File & Tool Co., Elizabeth, N. J.
Atkins, E. C., and Co., Indianapolis, Ind.
Bonney Forge & Tool Works, Allentown, Pa.
Carson-Newton Co., Belleville, N. J.
Delta File Works Inc., Philadelphia, Pa.
Disston, Henry & Sons, Inc., Tacony, Philadelphia, Pa.
DoAll Co., The, Des Plains, Ill.
Grobet File Co. of America, New York, N. Y.
Heller Brothers Co., Newark, N. J.
Lutz File & Tool Co., Cincinnati, Ohio
New Britain Machine Co., The, New Britain, Conn.
Nicholson File Co., Providence, R. I.
Plumb, Fayette R., Inc., Philadelphia, Pa.
Simonds Saw & Steel Co., Fitchburg, Mass.

FILES, American Pattern (Machine)

Atkins, E. C., & Co., Indianapolis, Ind.
Carson-Newton Co., Belleville, N. J.
Delta File Works, Philadelphia, Pa.
Disston, Henry, & Sons, Inc., Phila., Pa.
DoAll Co., The, Des Plains, Ill.
Grobet Co. of America, New York, N. Y.
Heller Brothers Co., Newark, N. J.
Lutz File & Tool Co., Cincinnati, Ohio
Nicholson File Co., Providence, R. I.
Plumb, Fayette R., Inc., Philadelphia, Pa.
Simonds Saw & Steel Co., Fitchburg, Mass.

FILES, Electrode-Tip-Dressing

Mallory & Co., P. H., Inc., Indianapolis, Ind.
Nicholson File Co., Providence, R. I.

FILES, Hand

American Swiss File & Tool Co., Elizabeth, N. J.
Atkins, E. C. and Co., Indianapolis, Ind.
Bonney Forge & Tool Works, Allentown, Pa.
Carson-Newton Co., Belleville, N. J.
Delta File Works, Philadelphia, Pa.
Disston, Henry, & Sons, Inc., Tacony, Philadelphia, Pa.
DoAll Co., The, Des Plains, Ill.
Grobet File Co. of America, New York, N. Y.
Heller Brothers Co., Newark, N. J.
Lutz File & Tool Co., (Norwood), Cincinnati, Ohio
Nicholson File Co., Providence, R. I.
Plumb, Fayette R., Inc., Philadelphia, Pa.
Simonds Saw and Steel Co., Fitchburgh, Mass.

FILES, Milled and Curved Tooth

American Swiss File & Tool Co., Elizabeth, N. J.
Atkins, E. C. & Co., Indianapolis, Ind.
Carson-Newton Co., Belleville, N. J.
Delta File Works, Inc., Philadelphia, Pa.
Disston, Henry & Sons, Inc., Tacony, Philadelphia, Pa.
Ford, M. A., Mfg. Co., Inc., Davenport, Iowa
Grobet File Co. of America, New York, N. Y.
Heller Brothers Co., Newark, N. J.
Lutz File & Tool Co., Cincinnati, Ohio
Nicholson File Co., Providence, R. I.
Plumb, Fayette R., Inc., Philadelphia, Pa.
Plumb Tool Co., Los Angeles, Calif.
Sandvik Saw & Tool Corp., New York, N. Y.

FILES, Pneumatic

Aro Equipment Corp., The, Bryan, Ohio
Chicago Pneumatic Tool Co., New York, N. Y.
Cleo Div., Reed Roller Bit Co., Houston, Texas.
Ideal Industries, Inc., Sycamore, Ill.
Ind. Pneum. Tool Co., Chicago, Ill.
Keller Tool Co., Grand Haven, Mich.
Lincoln Park Industries Inc., Detroit, Mich.
Nicholson File Co., Providence, R. I.
The Rotor Tool Co., Cleveland, Ohio

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Cleo Div., Reed Roller Bit Co., Houston, Texas
Delta File Works, Inc., Philadelphia, Pa.
DoAll Co., The, Des Plains, Ill.
Dremel Mfg. Co., Racine, Wis.
Elliott Mfg. Co., New York, N. Y.
Ford, M. A., Mfg. Co., Inc., Davenport, Iowa
Graham Rotary File & Tool Co., Philadelphia, Pa.
Grobet File Co. of America, New York, N. Y.
Hamilton Tool Co., Hamilton, Ohio
Haskins, R. G., Co., Chicago, Ill.
Heller Brothers Co., Newark, N. J.
Ideal Industries, Inc., Sycamore, Ill.
Ind. Pneumatic Tool Co., Aurora, Ill.
Lincoln Park Ind., Inc., Lincoln Park, Mich.
Nicholson File Co., Providence, R. I.
Plumb, Fayette R., Inc., Philadelphia, Pa.
Pratt & Whitney, Div. Niles-Brement-Pond Co., West Hartford, Conn.
Strand & Co., N. A., Chicago, Ill.
Stow Mfg. Co., Binghamton, N. Y.

FILES, Swiss Pattern (Hand)

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Carson-Newton Co., Belleville, N. J.
Disston, Henry, & Sons, Inc., Tacony, Philadelphia, Pa.
DoAll Co., The, Des Plains, Ill.
Grobet File Co. of America, New York, N. Y.
Heller Brothers Co., Newark, N. J.
Nicholson File Co., Providence, R. I.

FILES, Swiss Pattern (Machine)

American Swiss File & Tool Co., Elizabeth, N. J.
Carson-Newton Co., Belleville, N. J.
Grobet File Co. of America, New York, N. Y.
Heller Brothers Co., Newark, N. J.
Nicholson File Co., Providence, R. I.

FILMS, Radiographic

Ansco, Binghamton, N. Y.
E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
Eastman Kodak Co., X-Ray Div., Rochester, N. Y.
General Electric X-Ray Corp., Chicago, Ill.
Picker X-Ray Corp., New York, N. Y.
Westinghouse Elec. Corp., Pittsburgh, Pa.

FILTERS, Airline

Aro Equipment Corp., Bryan, Ohio
Bastian-Blessing Co., Chicago, Ill.
Brown, W. R., Co., Chicago, Ill.
Chicago Pneumatic Co., New York, N. Y.
Connecticut Blower Co., Hartford, Conn.
De Vilbiss Co., The, Toledo, Ohio
M-B Products Co., Detroit, Mich.
Paasche Airbrush Co., Chicago, Ill.
Schrader's, A., Son. Div. of Scovill Mfg. Co., Brooklyn, N. Y.
Sterling Tool Products Co., Chicago, Ill.

FILTERS, Welder

Air Filter Corp., Milwaukee, Wis.
American Agile Corp., Cleveland, Ohio
American Industrial Safety Equipt. Co., Brooklyn, N. Y.
Bullard, E. O., Co., San Francisco, Calif.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Fibre-Metal Products Co., The, Chester, Pa.
Fish-Schurman Corp., New York, N. Y.
Gasflux Co., The, Mansfield, Ohio
Jackson Products, Warren, Mich.
K-G Welding and Cutting Co., New York, N. Y.
Kimball Safety Prod. Co., Cleveland, Ohio
Metal & Thermit Corp., New York, N. Y.
Parsons Engineering Corp., Cleveland, Ohio

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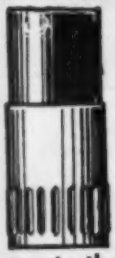

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Holcomb Safety Garment Co., Chicago, Ill.
Hooper & Sons Co., Wm. F., Juniper and Cherry, Philadelphia, Pa.
Quaker Chemical Products Corp., Conshohocken, Pa.
Wayne Chemical Products Co., Detroit, Mich.
Wolfe-Kote Co., Sheboygan, Wis.

FIRST AID KITS
(See: "Kits, First Aid")

FITTINGS, Hose
(See: "Couplings and Fittings, Hose")

FITTINGS, Hose, Welding
American Oxygen Service Corp., Harrison, N. J.
Arc Welding Supply Co., Bronx, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Crane Co., Chicago, Ill.
De Vilbiss Co., The, Toledo, Ohio
Dockson Corp., Detroit, Mich.
Eutectic Welding Alloys Corp., New York, N. Y.
General Detroit Corp., The, Detroit, Mich.
Goss Gas Inc., Pittsburgh, Pa.
Harris Calorific Co., The, Cleveland, Ohio
Hose Accessories Co., Philadelphia, Pa.
Imperial Brass Mfg. Co., The, Chicago, Ill.
Ind. Pneumatic Tool Co., Aurora, Ill.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Metro Manufacturing Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
Mulconroy Co., Philadelphia, Pa.
Nageldinger & Son, Inc., J., New York, N. Y.
National Welding Equip. Co., San Francisco, Calif.
Norgren Co., C. A., Denver, Colo.
Quaker Rubber Corp., Philadelphia, Pa.

FITTINGS, Pipe
Armco Steel Corp., Middletown, Ohio
Bonney Forge & Tool Works, Allentown, Pa.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Waterbury, Conn.
Crane Co., Chicago, Ill.
Flagg, Stanley G., & Co., Inc., Philadelphia, Pa.
Grinnel Co., Providence, R. I.
Haynes Stellite Co., New York, N. Y.
Imperial Brass Mfg. Co., The, Chicago, Ill. (Brass)
Kropp Forge Co., Chicago, Ill.
Ladish Co., Cudahy, Wis.
Lenape Hydraulic Press & Forging Co., West Chester, Pa.
Midwest Piping & Supply Co., Inc., St. Louis, Mo.
Parker Appliance Co., The, Cleveland, Ohio
Superior Valve & Fittings Co., Pittsburgh, Pa.
Taylor Forge & Pipe Works, Chicago, Ill.
Tube Turns, Inc., Louisville, Ky.
Wagner Iron Works, A. F., Milwaukee, Wis.
Watson-Stillman Co., Roselle, N. J.
Youngstown Welding & Engineering Co., The, Youngstown, Ohio

FITTINGS, Pipe Welding
(See: "Fittings, Welding")

FITTINGS, Tank
Bonney Forge & Tool Wks., Allentown, Pa.
Burdett Oxygen Co., Cleveland, Ohio
Crane Co., Chicago, Ill.
Goss Gas, Inc., Pittsburgh, Pa.
Haynes Stellite Co., New York, N. Y.
K-G Welding and Cutting Co., New York, N. Y.
Lenape Hydraulic Press & Forging Co., West Chester, Pa.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Lukens Steel Co., Coatesville, Pa.
Midwest Piping & Supply Co., Inc., St. Louis, Mo.
Nageldinger & Son, Inc., J., New York, N. Y.
Taylor Forge & Pipe Works, Chicago, Ill.

FITTINGS, Welding
Bonney Forge & Tool Wks., Allentown, Pa.
Bridgeport Brass Co., Bridgeport, Conn.
Burdett Oxygen Co., Cleveland, Ohio
Crane Co., Chicago, Ill.
Flagg, Stanley G. & Co., Inc., Philadelphia, Pa.
Globe Steel Tubes Co., Milwaukee, Wis.
Grinnell Co., Inc., Providence, R. I.
Harris Calorific Co., The, Cleveland, Ohio
Haynes Stellite Co., New York, N. Y.
K-G Welding and Cutting Co., New York, N. Y.
Ladish Co., Cudahy, Wis.
Lenape Hydraulic Pressing & Forging Co., West Chester, Pa.
Linde Air Products Co., The, New York, N. Y.
Metro Manufacturing Co., Long Island City, N. Y.
Midwest Piping & Supply Co., Inc., St. Louis, Mo.
Modern Engineering Co., Inc., St. Louis, Mo.
Nageldinger & Son, Inc., J., New York, N. Y.
Taylor Forge & Pipe Works, Chicago, Ill.
Tube Turns, Inc., Louisville, Ky.
Victor Equipment Co., San Francisco, Calif.
Watson-Stillman Co., Roselle, N. J.
Wagner Iron Works, A. F., Milwaukee, Wis.

FIXTURES, Welding
(See: "JIGS AND FIXTURES," and "POSITIONERS, WELDING")

FLAME CUTTING GUIDES & TEMPLETS
(See: "Cutting Guides, Flame")

FLAME CUTTING MACHINES
(See: "Machines, Cutting, Flame")

FLAME CUTTING TORCHES
(See: "Torches Cutting, Gas" and "Torches, Cutting, Powder")

FLAME-HARDENING EQUIPMENT
Air Reduction Sales Co., New York, N. Y.
Amer. Oxygen Service Corp., Harrison, N. J.
Burdett Oxygen Co., Cleveland, Ohio
Cincinnati Milling Machine Co., Cincinnati Ohio
Dockson Corp., Detroit, Mich.
Gas Appliance Service, Inc., Chicago, Ill.
Harris Calorific Co., The, Cleveland, Ohio
Industrial Oxygen Co., Louisville, Ky.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals, Div., Chicago, Ill.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welding Equipment Co., San Francisco, Calif.
Oxweld Railroad Service Co., The, New York, N. Y.
Selas Corp. of America, Philadelphia, Pa.
Stearns-Roger Mfg. Co., Denver, Colo.
Surface Combustion Corp., Toledo, Ohio
Victor Equipment Co., San Francisco, Calif.

FLAME-PRIMING HEADS
Air Reduction Sales Co., New York, N. Y.
Harris Calorific Co., The, Cleveland, Ohio
Linde Air Products Co., The, New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
Oxweld Railroad Service Co., The, New York, N. Y.
Victor Equipment Co., San Francisco, Calif.

FLAME-SPINNING HEADS
Air Reduction Sales Co., New York, N. Y.
Harris Calorific Co., The, Cleveland, Ohio
Linde Air Products Co., The, New York, N. Y.

FLANGES, Pipe
Armco Steel Corp., Middletown, Ohio
Chase Brass & Copper Co., Waterbury, Conn.
Crane Co., Chicago, Ill.
Grinnell Co., Inc., Providence, R. I.
Ladish Co., Cudahy, Wis.
Watson-Stillman Co., Roselle, N. J.

FLANGES, Welding
Crane Co., Chicago, Ill.
Grinnell Co., Inc., Providence, R. I.
Ladish Co., Cudahy, Wis.
Taylor Forge & Pipe Works, Chicago, Ill.
Tube Turns, Inc., Louisville, Ky.
Vogt, Henry, Machine Co., Louisville, Ky.
Walworth Co., New York, N. Y.
Watson-Stillman Co., Roselle, N. J.

FLANGING MACHINES
(See: "Machines, Flanging")

FLASH PREVENTIVE
Acme Lead & Color Works, Detroit, Mich.
General Scientific Equip. Co., Philadelphia, Pa.
Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.
Harris Calorific Co., The, Cleveland, Ohio
Milburn Co., Detroit, Mich.
Oakite Products, Inc., New York, N. Y.
Smith, G. W., & Sons, Inc., Dayton, Ohio
Wayne Chemical Prod. Co., Detroit, Mich.
Wolfe-Kote Co., Sheboygan, Wis.

FLASH WELDERS, Resistance
(See: "WELDERS, FLASH")

FLEXIBLE-SHAFT EQUIPMENT
Aristo Power Tools, Inc., Chicago, Ill.
Chicago Wheel & Mfg. Co., Chicago, Ill.
Elliott Mfg. Co., Binghamton, N. Y.
Haskins, R. G., Co., Chicago, Ill.
Mall Tool Co., Chicago, Ill.
Spring Specialty Co., Maywood, Ill.
Stow Mfg. Co., Binghamton, N. Y.
Strand, N. A., & Co., Chicago, Ill.
Wyzenbeek and Staff, Inc., Chicago, Ill.

FLEXIBLE SHAFT EQUIPMENT
(See: "Machines, Flexible Shaft" and "Shafts, Flexible")

FLINT, For Gas Lighters
Flint Products Co., Brooklyn, N. Y.
Fuller Mfg. Co., Cincinnati, Ohio
Modern Engineering Co., St. Louis, Mo.
Randall Mfg. Co., No. Kansas City, Mo.
Safety Gas Lighter Co., Lynn, Mass.
Smith Welding Equip. Co., Minneapolis, Minn.

FLOODLIGHT and FLARELIGHTS
General Electric Co., Schenectady, N. Y.
Linde Air Products Co., The, New York, N. Y.
Sight Feed Generator Co., The, Richmond, Ind.
Stevens & Co., Inc., C. H., South Norwalk, Conn.

FLUX DISPENSERS
Aluminum Co. of America, Pittsburgh, Pa.
Gasflux Co., The, Mansfield, Ohio
Linde Air Products Co., The, New York, N. Y.
Sight Feed Generator Co., The, Richmond, Ind.
Victor Equipment Co., San Francisco, Calif.

FLUX, Heating-Element Repair
Burdett Oxygen Co., Cleveland, Ohio
Chanite Sales Co., Fort Worth, Tex.
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Metal Bond Mfg. Co., St. Louis, Mo.
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No. 130 Soldering Syrup
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American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Atkins, E. C. and Co., Indianapolis, Ind.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Cleveland Precision Ring & Products Co., Cleveland, Ohio (Paste & Liquid only)
Diener, Geo. W., Mfg. Co., Chicago, Ill.
E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
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Flux-All Chemical Prod. New York, N. Y.
Gardiner Metal Co., Chicago, Ill.
General Electric Co. (Merchandise Dept.), Bridgeport, Conn.
Johnson Welders Supply Co., Mt. Vernon, Iowa
Kester Solder Co., Chicago, Ill.
Klem Chemicals, Inc., Dearborn, Mich.
Krieg, Charles W., Co., Newark, N. J.
Lake Chemical Co., Chicago, Ill.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Metro Manufacturing Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
National Lead Co., New York, N. Y.
National Welders Supply Co., Charlotte, N. C.
Ohio Carbon Co., The, Cleveland, Ohio
Ohmer, George H., Dayton, Ohio
Pal-Weld Mfg. Co., Seattle, Wash.
Phillips, C. E. & Co., Detroit, Mich.
Puritan Compressed Gas Corp., Kansas City, Mo.
Ruby Chemical Co., The, Columbus, Ohio, (Paste & Liquid, only)
Special Chemicals Corp., New York, N. Y.
Sulflo, Inc., Elizabeth, N. J.
Superior Flux Co., Cleveland, Ohio
Wayne Chemical Products Co., Detroit, Mich.
Williams & Co., Inc., Pittsburgh, Pa.
Wolfe-Kote Co., Inc., Sheboygan, Wis.
York Engineering Co., Chicago, Ill.

FLUXES, Aluminum

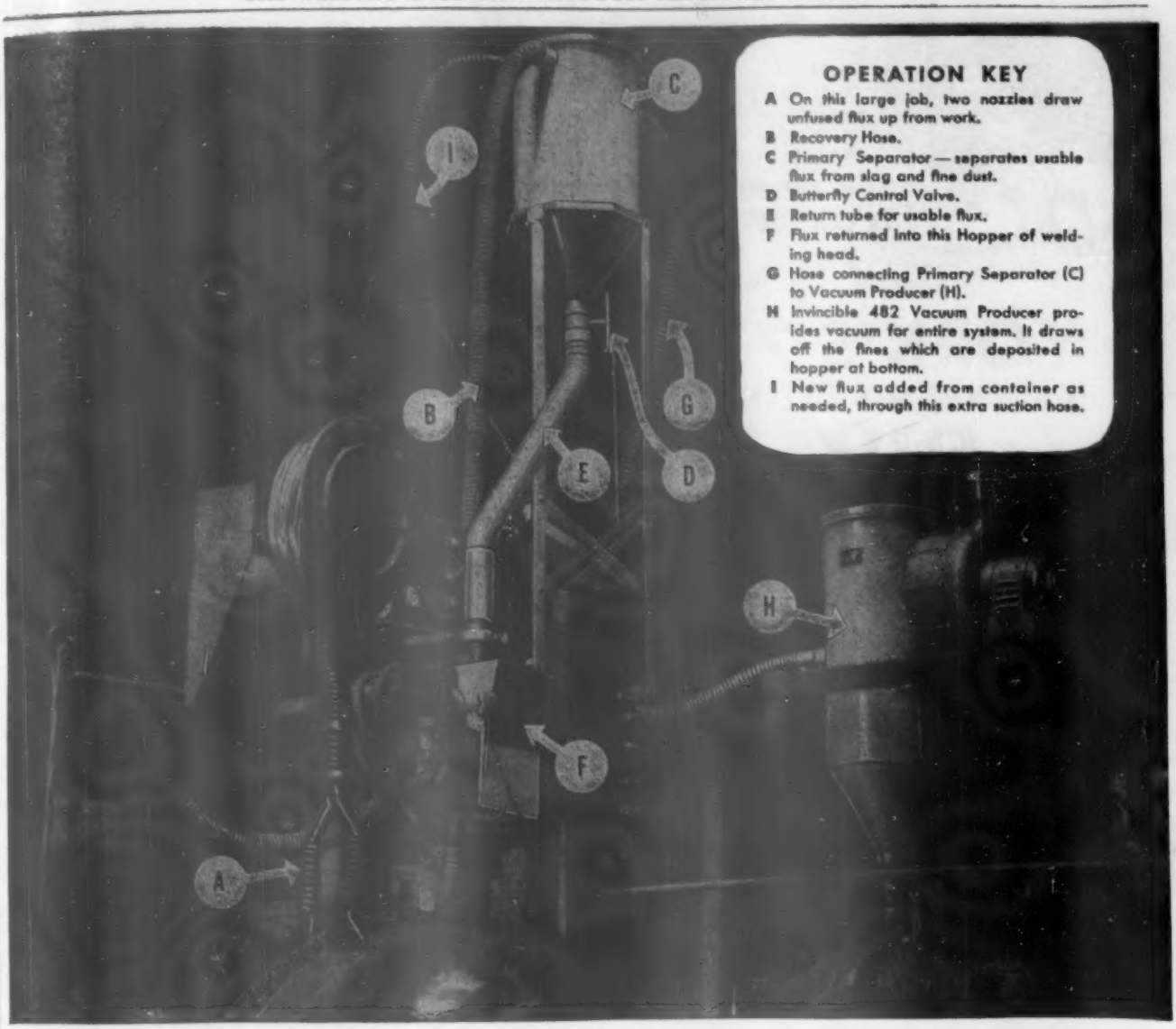
Air Reduction Sales Co., New York, N. Y.
Aluminum Co. of America, Pittsburgh, Pa.
All-State Welding Alloys Co., White Plains, N. Y.
American Chemical & Flux Co., Brooklyn, N. Y.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anti-Borax Compound Co., Inc., Ft. Wayne, Ind.
Arc Welding Supply Co., Bronx, N. Y.
Belmont Smelting & Flux Co., Philadelphia, Pa.
Burdett Oxygen Co., Cleveland, Ohio
Central Steel & Wire Co., Chicago, Ill.
Champion Rivet Co., Cleveland, Ohio
Chicago Hardware Foundry Co., North Chicago, Ill.
Childs Aluminum Solder Co., New York, N. Y.
Cortland Welding Compound Co., Cortland, N. Y.
Craftsweld Equip. Corp., Long Island City, N. Y.
Croton Chemical Corp., New York, N. Y.
Dockson Corp., Detroit, Mich.
Eutectic Welding Alloys Co., New York, N. Y.
Farrelloy Co., Philadelphia, Pa.
Flux-All Chemical Prod., New York, N. Y.
General Welding & Equip. Co., Boston, Mass.
Hollup Corp., Chicago, Ill.
Imperial Brass Mfg. Co., Chicago, Ill.
Indiana Oxygen Co., Indianapolis, Ind.
Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
Johnson Mfg. Co., Inc., Mt. Vernon, Iowa
Johnson Mfg. Co., Mt. Vernon, Iowa
Kester Solder Co., Chicago, Ill.
K-G Welding and Cutting Co., New York, N. Y.
Krieg, Charles W. Co., Newark, N. J.
Krembs and Co., Chicago, Ill.
Linde Air Prod. Co., New York, N. Y.
Marquette Mfg. Co., Minneapolis, Minn.
Mauk, A. F., Pittsburgh, Pa.
Metal Bond Mfg. Co., St. Louis, Mo.
Metallizing Co., of America, Chicago, Ill.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
Morey Flux & Chem. Co., Wilmington, Del.
National Cylinder Gas Co., Chicago, Ill.
National Lead Co., New York, N. Y.
National Welders Supply Co., Charlotte, N. C.
National Welding Equipment Co., San Francisco, Calif.
Northeast Metals Co., Philadelphia, Pa.
Ohmer, George H., Dayton, Ohio
Oxweld Railroad Service Co., The, New York, N. Y.
Pal-Weld Mfg. Co., Seattle, Wash.
Park Stewart, Worthington, Pa.
Phillips, C. E. & Co., Detroit, Mich.
Pittsburgh Metals Purifying Co., Pittsburgh, Pa.
Smith Welding Equipment Corp., Minneapolis, Minn.
Special Chemicals Corp., New York, N. Y.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Standard Steel & Wire Co., Bolivar, Pa.
Steel Sales Corp., Chicago, Ill.
Stuart Oxygen Co., San Francisco, Calif.
Superior Flux Co., Cleveland, Ohio
Torit Manufacturing Co., St. Paul, Minn.
Universal Power Corp., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Welding Alloys Mfg. Co., Newark, N. J.
Welding Equip. & Sup. Co., Detroit, Mich.
Weldit, Inc., Detroit, Mich.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wooldridge Aluminum Welding Products, Inc. Glastonbury, Conn.

FLUXES, Aluminum-Bronze

Air Reduction Sales Co., New York, N. Y.
Allen, L. B., Co., Chicago, Ill.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Chemical & Flux Co., Brooklyn, N. Y.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Ampco Metal, Inc., Milwaukee, Wis.
Anti-Borax Compound Co., Inc., Ft. Wayne, Ind.
Burdett Oxygen Co., Cleveland, Ohio
Childs Aluminum Solder Co., New York, N. Y.
Cortland Welding Compound Co., Cortland, N. Y.
Croton Chemical Co., New York, N. Y.
Dockson Corp., Detroit, Mich.
Eutectic Welding Alloys Co., New York, N. Y.
Farrelloy Co., Philadelphia, Pa.
Faulk, F. R., Pittsburgh, Pa.
Hollup Corp., Chicago, Ill.
Imperial Brass Mfg. Co., Chicago, Ill.
Johnson, Lloyd S. Co., Chicago, Ill.
Krembs and Co., Chicago, Ill.
Krieg, Charles W. Co., Newark, N. J.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbide Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metal Bond Mfg. Co., St. Louis, Mo.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
Morey Flux & Chem. Co., Wilmington, Del.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
Ohmer, George H., Dayton, Ohio
Phillips, C. E. & Co., Detroit, Mich.
Pittsburgh Metal Purifying Co., Pittsburgh, Pa.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Steel Sales Corp., Chicago, Ill.
Superior Flux Co., Cleveland, Ohio
Torit Manufacturing Co., St. Paul, Minn.
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Weldit, Inc., Detroit, Mich.
Williams & Co., Inc., Pittsburgh, Pa.

FLUXES, Brazing

Air Reduction Sales Co., New York, N. Y.
Aladdin Rod & Flux Mfg. Co., Grand Rapids, Mich.
Allen, L. B., Co., Chicago, Ill.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
Aluminum Co. of America, Pittsburgh, Pa.
American Chemical & Flux Co., Brooklyn, N. Y.
American Oxygen Service Corp., Harrison, N. J.
American Platinum Works, The, Newark, N. J.
American Products Corp., Chicago, Ill.
(Continued on Page 72)



INVINCIBLE Flux Recovery Unit Saves Labor, Quickly Pays for Itself

This Invincible continuous flow system was installed by a manufacturer of circular lifting magnets to recover flux during a large automatic welding job. Previously, the excess flux was manually collected and screened. Now this Invincible system does the entire job automatically (see key to operation picture). By thus saving one man's labor, the installation is expected to pay for itself in three months. Invincible supplies both manually operated and completely automatic Flux Recovery Systems. Scores of installations are saving labor, salvaging valuable material and improving production efficiency. *Without obligation an Invincible engineer will advise you about your flux recovery problem in automatic welding.*

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FOR 40 YEARS, LEADERS IN INDUSTRIAL VACUUM EQUIPMENT

Save Material!

(MEND THE HOLE IN THE BOTTOM AND YE CAN COOK IN THE WHOLE KETTLE)

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YORK'S 77
CAST IRON BRAZING
FLUX

1. Fear of overheating can be forgotten.
2. Cleaning and grinding are unnecessary, because "York's 77" penetrates through grease, oxides, etc.
3. Chipping is unnecessary, because a satisfactory bond can be obtained on oxidized surfaces.
4. Deteriorated cast iron can always be welded successfully with "York's 77."

YORK ENGINEERING COMPANY
3349 OGDEN AVE. • CHICAGO 23, ILL.

FLUXES, Brazing

(Continued from Page 70)

American Solder & Flux Co., Philadelphia, Pa.
Anti-Borax Compound Co., Inc., Ft. Wayne, Ind.
Arc Welding Supply Co., Bronx, N. Y.
Automatic Gasflux Mfg. Co., Mansfield, Ohio
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Chase Brass & Copper Co., Waterbury, Conn.
Chicago Hardware Foundry Co., North Chicago, Ill.
Childs Aluminum Solder Co., New York, N. Y.
Cleveland Precision Ring & Products Co., Cleveland, Ohio
Cortland Welding Compound Co., Cortland, N. Y.
Craftsweld Equip. Corp., Long Island City, N. Y.
Croton Chemical Co., New York, N. Y.
Dockson Corp., Detroit, Mich.
Eagle Welding Equipment Co., Chicago, Ill.
Eutectic Welding Alloys Co., New York, N. Y.

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FLUXES

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• Low Temperature Fluxes
• Gas Saving Fluxes

• Send for free samples •

ANTI-BORAX COMPOUND CO.
FORT WAYNE, INDIANA

Farreloy Co., Philadelphia, Pa.
Faulk, F. R., Pittsburgh, Pa.
Gasflux Co., The, Mansfield, Ohio
General Welding & Equip Co., Boston, Mass.
Goldsmith Bros. Smelting & Ref. Co., Chicago, Ill.
Handy & Harman, New York, N. Y.
Holden, A. F., Co., The, New Haven, Conn.
Hollup Corp., Chicago, Ill.
Imperial Brass Mfg. Co., The, Chicago, Ill.
Indiana Oxygen Co., Indianapolis, Ind.
International Nickel Co., Inc., New York, N. Y.
Johnson, Lloyd S., Co., Chicago, Ill.
Johnson Mfg. Co., Inc., Mt. Vernon, Iowa
K-G Welding & Cutting Co., Inc., New York, N. Y.
Klem Chemical Works, Detroit, Mich.
Krembs and Co., Chicago, Ill.
Krieg, Charles W., Co., Newark, N. J.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
Mallory, P. R., & Co., Inc., Indianapolis, Ind.
Mauk, A. K., Pittsburgh, Pa.
McCauley Alloy Sales Co., Chicago, Ill.
McCauley Alloy Co., Steger, Ill.
Metal Bond Mfg. Co., St. Louis, Mo.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis Mo.
Morey Flux & Chem. Co., Wilmington, Del.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
National Welding Equipment Co., San Francisco, Calif.
Northeast Metals Co., Philadelphia, Pa.
Ohmer, George H., Dayton, Ohio
Oxweld Railroad Service Co., The, Chicago, Ill.
Pal-Weld Mfg. Co., Seattle, Wash.
Peterson Welding Lab., Kansas City, Mo.
Phillips, C. E., & Co., Detroit, Mich.
Pittsburgh Metals Purifying Co., Pittsburgh, Pa.
Purity Cylinder Gases, Inc., Grand Rapids, Mich.
Sherman & Co., New York, N. Y.
Sight Feed Generator Co., The, Richmond, Ind.
Smith Welding Equipment Corp., Minneapolis, Minn.
Special Chemicals Corp., New York, N. Y.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Steel Sales Corp., Chicago, Ill.
Stuart Oxygen Co., San Francisco, Calif.
Superior Flux Co., Cleveland, Ohio
Trindl Products Ltd., Chicago, Ill.
U. S. Steel Supply Co., Chicago, Ill.
United Wire & Supply Corp., Providence, R. I.
Universal Power Corp., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Welding Alloys Mfg. Co., Newark, N. J.
Welding Equip & Sup. Co., Detroit, Mich.
Welding Gas Products Co., Chattanooga, Tenn.
Weldit, Inc., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wooldridge Aluminum Welding Products, Inc., Glastonbury, Conn. (Aluminum only)
Wow Welding Specialties Co., Chicago, Ill.
York Engineering Co., Chicago, Ill.

FLUXES, Cast-Iron

Air Reduction Sales Co., New York, N. Y.
Aladdin Rod & Flux Mfg. Co., Grand Rapids, Mich.
Allen, L. B., Co., Chicago, Ill.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
Alwarth Chemical Corp., New York, N. Y.
American Chemical & Flux Co., Brooklyn, N. Y.
American Oxygen Service Corp., Harrison, N. J.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anti-Borax Compound Co., Inc., Ft. Wayne, Ind.
Arc Welding Supply Co., Bronx, N. Y.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Chicago Hardware Foundry Co., North Chicago, Ill.
Childs Aluminum Solder Co., New York, N. Y.
Cortland Welding Compound Co., Cortland, N. Y.
Craftsweld Equip. Corp., Long Island City, N. Y.
Croton Chemical Corp., New York, N. Y.
Dockson Corp., Detroit, Mich.
Eagle Welding Equipment Co., Chicago, Ill.
Eutectic Welding Alloys Co., New York, N.Y.
Farreloy Co., Philadelphia, Pa.
General Welding & Equip. Co., Boston, Mass.
Hollup Corp., Chicago, Ill.
Imperial Brass Mfg. Co., The, Chicago, Ill.
Indiana Oxygen Co., Indianapolis, Ind.
Johnson, Lloyd S., Co., Chicago, Ill.
Johnson Mfg. Co., Inc., Mt. Vernon, Iowa
K-G Welding & Cutting Co., Inc., New York, N. Y.
Krembs and Co., Chicago, Ill.
Krieg, Charles W., Co., Newark, N. J.
Linde Air Products Co., New York, N. Y.
Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metal Bond Mfg. Co., St. Louis, Mo.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
Morey Flux & Chem. Co., Wilmington Del.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
National Welding Equipment Co., San Francisco, Calif.
Northeast Metals Co., Philadelphia, Pa.
Ohmer, George H., Dayton, Ohio
Oxweld Railroad Service Co., The, Chicago, Ill.
Pal-Weld Mfg. Co., Seattle, Wash.
Peterson Welding Lab., Kansas City, Mo.
Phillips, C. E., & Co., Detroit, Mich.
Pittsburgh Metals Purifying Co., Pittsburgh, Pa.
Pratt-Brayman Co., Oscoda, Mich.
Purity Cylinder Gases, Inc., Grand Rapids, Mich.
Rall Supply Co., New York, N. Y.
Sight Feed Generator Co., The, Richmond, Ind.
Smith Welding Equipment Corp., Minneapolis, Minn.
Special Chemicals Co., New York, N. Y.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Standard Steel & Wire Co., Bolivar, Pa.
Steel Sales Corp., Chicago, Ill.
Stuart Oxygen Co., San Francisco, Calif.
Superior Flux Co., Cleveland, Ohio
Universal Power Corp., Cleveland, Ohio
U. S. Steel Supply Co., Chicago, Ill.
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Welding Alloys Mfg. Co., Newark, N. J.
Welding Equip. & Sup. Co., Detroit, Mich.
Welding Gas Products Co., Chattanooga, Tenn.
Weldit, Inc., Detroit, Mich.
Williams & Co., Inc., Pittsburgh, Pa.
Wow Welding Specialties Co., Chicago, Ill.
York Engineering Co., Chicago, Ill.

FLUXES, Flame-Cutting

(See also: "Powder Flame-Cutting")

Air Reduction Sales Co., New York, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Eutectic Welding Alloys Corp., New York, N. Y.
General Welding & Equipment Co., Boston, Mass.
Linde Air Products Co., The, New York, N. Y.
Metal Bond Mfg. Co., St. Louis, Mo.
National Welders Supply Co., Charlotte, N. C.
Pittsburgh Metals Purifying Co., Pittsburgh, Pa.

FLUXES, Inconel

Air Reduction Sales Co., New York, N. Y.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Chemical & Flux Co., Brooklyn, N. Y.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anti-Borax Compound Co., Inc., Ft. Wayne, Ind.
Burdett Oxygen Co., Cleveland, Ohio
Childs Aluminum Solder Co., New York, N. Y.
Eutectic Welding Alloys Co., New York, N. Y.
Farreloy Co., Philadelphia, Pa.
International Nickel Co., Inc., New York, N. Y.
Johnson, Lloyd S., Co., Chicago, Ill.
Krembs and Co., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
Metal Bond Mfg. Co., St. Louis, Mo.
Morey Flux & Chem. Co., Wilmington, Del.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
Ohmer, George H., Dayton, Ohio
Phillips, C. E., & Co., Detroit, Mich.
Solar Aircraft Co., San Diego, Calif.
Special Chemicals Corp., New York, N. Y.
Steel Sales Corp., Chicago, Ill.
Superior Flux Co., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

FLUXES, Magnesium

Air Reduction Sales Co., New York, N. Y.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Magnesium Corp., Pittsburgh, Pa.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anti-Borax Compound Co., Inc., Ft. Wayne, Ind.
Burdett Oxygen Co., Cleveland, Ohio
Childs Aluminum Solder Co., New York, N. Y.
Croton Chemical Corp., New York, N. Y.
Dow Chemical Co., The, Midland, Mich.
Eutectic Welding Alloys Co., New York, N. Y.
Farreloy Co., Philadelphia, Pa.
Linde Air Products Co., The, New York, N.Y.
Marquette Mfg. Co., Minneapolis, Minn.
Metal Bond Mfg. Co., St. Louis, Mo.
Morey Flux & Chemical Co., Wilmington, Del.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
Ohmer, George H., Dayton, Ohio
Park Stewart, Worthington, Pa.
Phillips, C. E., & Co., Detroit, Mich.
Pittsburgh Metals Purifying Co., Pittsburgh, Pa.
Special Chemical Corp., New York, N. Y.
Superior Flux Co., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Welding Alloys Mfg. Co., Newark, N. J.
Wooldridge Aluminum Welding Products, Glastonbury, Conn.

FLUXES, Monel

Air Reduction Sales Co., New York, N. Y.
Allen, L. B., Co., Chicago, Ill.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Chemical & Flux Co., Brooklyn, N. Y.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Phila., Pa.
Anti-Borax Compound Co., Inc., Ft. Wayne, Ind.
Burdett Oxygen Co., Cleveland, Ohio
Childs Aluminum Solder Co., New York, N. Y.
Eutectic Welding Alloys Co., N. Y., N. Y.
Farreloy Co., Philadelphia, Pa.
International Nickel Co., Inc., N. Y., N.Y.
Johnson, Lloyd S., Co., Chicago, Ill.
Lire-Co Multichemic Flux Div., of Charles W. Krieg Co., Newark, N. J.

WELDING **PETERSON** BRAZING

"FLUXES OF MERIT"

★ **STICKS TO ROD**—WILL NOT BLOW OFF. SAVES TIME AND ASSURES A BETTER JOB.

★ **CLEANS — FLOWS** TO RUSTY, GREASY, BURNED CAST IRON. CRACKS MAY BE VEED WITH OXYGEN INSTEAD OF GRINDING OR CHIPPING.

★ **BONDS**—ASSURES STRONG BOND TO GROUND OR OXIDIZED SURFACES.

No. 3 SPECIAL LOW HEAT—Has same effect as No. 2—at low temperatures. For expansion and contraction problem jobs.

No. 1 BLUE—Welds brass, copper, brazes steel — malleable — cast iron. Exceptional flow and bond on these metals.

No. 5 CAST—Welds cast iron without pinholes or hard spots; makes a soft machinable weld.

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SODERING
BRAZING & WELDING
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SILVER SODER AND BRAZING ALLOYS
All standard sizes wire and ribbon
All standard alloys.
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All standard alloys

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Krembs and Co., Chicago, Ill.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
Metal Bond Mfg. Co., St. Louis, Mo.
Morey Flux & Chemical Co., Wilmington, Del.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
Ohmer, George H., Dayton, Ohio
Phillips, C. E., & Co., Detroit, Mich.
Ruby Chemical Co., The, Columbus, Ohio
Special Chemicals Corp., New York, N. Y.
Steel Sales Corp., Chicago, Ill.
Sulfio, Inc., Elizabeth, N. J.
Superior Flux Co., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wolfe-Kote Co., Sheboygan, Wis.
Wow Welding Specialties Co., Chicago, Ill.

FLUXES, Silver-Brazing

Air Reduction Sales Co., New York, N. Y.
Allen Co., L. B., Chicago, Ill.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Chemical & Flux Co., Brooklyn, N. Y.
American Platinum Works, The, Newark, N. J.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anti-Borax Compound, Co., Inc., Ft. Wayne, Ind.
Arc Welding Supply Co., Bronx, N. Y.
Atkins, E. C. & Co., Indianapolis, Ind.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Chase Brass & Copper Co., Waterbury, Conn.
Childs Aluminum Solder Co., New York, N. Y.
Cleveland Precision Ring & Products Co., Cleveland, Ohio
Craftsweld Equipment Corp., Long Island City, N. Y.
Croton Chemical Co., New York, N. Y.
Dockson Corp., Detroit, Mich.
Eutectic Welding Alloys Co., New York, N. Y.
Farreloy Co., Philadelphia, Pa.
Flux-All Chemical Prod., New York, N. Y.
Gasflux Co., The, Mansfield, Ohio
Goldsmith Bros. Smelting & Refining Co., Chicago, Ill.
Handy & Harman, New York, N. Y.

(Continued on Page 74)

WELDING FLUX
For cast iron and cast ferrous alloys

BRAZING COMPOUND
For steel and non-ferrous metals

ALUMINUM FLUX
For aluminum and its alloys

THE CHICAGO HARDWARE FOUNDRY CO.
NORTH CHICAGO ILLINOIS

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TRY THE SUPERIOR

XCEL-FLUX "SS"

PASTE FOR

SILVER SOLDERING

Produces Higher Tensile Strength. Cleaner Joints at lower melting point. Write for generous sample on company letterhead.

(Fluxes For All Metals)

AMERICAN PRODUCTS CORPORATION

422 S. DEARBORN ST. • CHICAGO 5, ILL.

FLUXES, Silver-Brazing

(Continued from Page 73)

Johnson Mfg. Co., Inc., Mt. Vernon, Iowa
Krieg, Charles W., Co., Newark, N. J.
Krembs and Co., Chicago, Ill.
Johnson, Lloyd S., Co., Chicago, Ill.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Mallory, P. R., & Co., Inc., Indianapolis, Ind.
Marquette Mfg. Co., Minneapolis, Minn.
Metro Manufacturing Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
Morey Flux & Chemical Co., Wilmington, Del.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
Oxweld Railroad Service Co., Chicago, Ill.
Phillips, C. E., & Co., Detroit, Mich.
Sherman & Co., New York, N. Y.
Special Chemicals Corp., New York, N. Y.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Steel Sales Corp., Chicago Ill.
Stuart Oxygen Co., San Francisco, Calif.
Superior Flux Co., Cleveland, Ohio
United Wire & Supply Corp., Providence, R. I.
Universal Power Corp., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Westinghouse Electric Corp., Pittsburgh, Pa.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

FLUXES, Soldering

Air Reduction Sales Co., New York, N. Y.
All State Welding Alloys Co., Inc., White Plains, N. Y.
Alpha Metals, Inc., Brooklyn, N. Y.
Aluminum Co. of America, Pittsburgh, Pa.
American Chemical & Flux Co., Brooklyn, N. Y.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Burdett Oxygen Co., The, Cleveland, Ohio
Castle A. M. & Co., Chicago, Ill.
Chase Brass & Copper Co., Waterbury, Conn.
Childs Aluminum Solder Co., New York, N. Y.
Croton Chemical Co., New York, N. Y.
E. I. duPont deNemours & Co., Grasselli Chemicals Dept., Wilmington, Del.
Eutectic Welding Alloys Co., New York, N. Y.
Klem Chemical Works, Detroit, Mich.
Krembs & Co., Chicago, Ill.
Krieg, Charles W, Co., Newark, N. J.
Lake Chemical Co., Chicago, Ill.
Johnson, Lloyd S., Co., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metal Bond Mfg. Co., St. Louis, Mo.
Metallizing Co. of America, Chicago, Ill.
National Lead Co., New York, N. Y.
Ohio Carbon Co., The, Cleveland, Ohio
Ryerson, Joseph T. & Sons, Inc., Chicago, Ill.
Smith Welding Equip. Corp., Minneapolis, Minn.
Special Chemicals Corp., New York, N. Y.
Stuart Oxygen Co., San Francisco, Calif.
Superior Flux Co., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Wayne Chemical Products, Detroit, Mich.
Whitehead Metal Products Co., Inc., New York, N. Y.
Wolfe-Kote Co., Sheboygan, Wis.
Wow Welding Specialties Co., Chicago, Ill.

FLUXES, Stainless-Steel

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Air Reduction Sales Co., New York, N. Y.
Allen, L. B., Co., Chicago, Ill.
Alpha Metals, Inc., Brooklyn, N. Y.
American Chemical & Flux Co., Brooklyn, N. Y.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anti-Borax Compound Co., Inc., Ft. Wayne, Ind.
Arc Welding Supply Co., Bronx, N. Y.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Burdett Oxygen Co., The, Cleveland, Ohio
Chanite Sales Co., Fort Worth, Tex.
Cleveland Precision Ring & Products Co., Cleveland, Ohio
Croton Chemical Corp., New York, N. Y.
Dockson Corp., Detroit, Mich.
Eutectic Welding Alloys Co., New York, N. Y.
Farreloy Co., Philadelphia, Pa.
Faulk, F. R., Pittsburgh, Pa.
Flux-All Chemical Products, New York, N. Y.
Gasflux Co., The, Mansfield, Ohio
Hollup Corp., Chicago, Ill.
International Nickel Co., Inc., The, New York, N. Y.
Johnson, Lloyd S., Co., Chicago, Ill.
Kester Solder Co., Chicago, Ill.
Krieg, Charles W., Co., Newark, N. J.
Krembs and Co., Chicago, Ill.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
Metal Bond Mfg. Co., St. Louis, Mo.
Metro Manufacturing Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
Morey Flux & Chemical Co., Wilmington, Del.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
Ohmer, George H., Dayton, Ohio
Oxweld Railroad Service Co., The, Chicago, Ill.
Pittsburgh Metals Purifying Co., Pittsburgh, Pa.
Purity Cylinder Gases, Inc., Grand Rapids, Mich.
Ruby Chemical Co., The, Columbus, Ohio
Sherman & Co., New York, N. Y.
Solar Aircraft Co., San Diego, Calif.
Special Chemicals Corp., New York, N. Y.
Steel Sales Corp., Chicago, Ill.
Stuart Oxygen Co. San Francisco, Calif.
Sulflo, Inc., Elizabeth, N. J.
Superior Flux Co., Cleveland, Ohio
United Wire & Supply Corp., Providence, R. I.
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wolfe-Kote Co., Sheboygan, Wis.
Wow Welding Specialties Co., Chicago, Ill.
York Engineering Co., Chicago, Ill.

FORGES, Brazing, Saw

Eclipse Fuel Engineering Co., Rockford, Ill.
General Electric Co., Schenectady, N. Y.
Johnson Gas Appliance Co., Cedar Rapids, Iowa
Massillion Refractories Co., The, Massillion, Ohio
Sunbeam Stewart Industrial Furnace Division, Sunbeam Corp., Chicago, Ill.

FORGES, Portable

Buffalo Forge Co., Buffalo, N. Y.
Champion Blower and Forge Co., Lancaster, Pa.
Eclipse Fuel Eng'r Co., Rockford, Ill.
R. S. Products Corp., Philadelphia, Pa.
Sunbeam Industrial Furnace Div. Sunbeam Corp., Chicago, Ill.

FUME COLLECTORS & REMOVERS

(See: "Ventilating Apparatus" and "Collectors, Exhausters and Blower Systems")

FURNACES, Brazing

Ajax Electric Co., Inc., Philadelphia, Pa.
Ajax Electrothermic Corp., Trenton, N. J.
Burdett Oxygen Co., Cleveland, Ohio
Commerce Pattern Foundry & Machine Co., Detroit, Mich.
Continental Industrial Engineers' Co., Chicago, Ill.
Despatch Oven Co., Minneapolis, Minn.
Eclipse Fuel Engineering Co., Rockford, Ill.
Falcon Equipment Co., New Brighton, Pa.
Firth Sterling Steel & Carbide Corp., McKeesport, Pa.
General Electric Co., Schenectady, N. Y.
Gordon, Claud S., Co., Chicago, Ill.

Hayes, Inc., C. I., Providence, R. I.
Hevi-Duty Electric Co., Milwaukee, Wis.
Holcroft & Co., Detroit, Mich.
Holden, A. F., Co., The, West Haven, Conn.
Hoskins Mfg. Co., Detroit, Mich.
Lindberg Engineering Co., Chicago, Ill.
Mahr Mfg. Co., Div. of Diamond Iron Works, Inc., Minneapolis, Minn.
R-S Products Corp., Philadelphia, Pa.
Simonski, Gilbert S., Philadelphia, Pa.
Sunbeam Industrial Furnace Div. Sunbeam Corp., Chicago, Ill.
Surface Combustion Corp., Toledo, Ohio
Tate, Jones & Co., Pittsburgh, Pa.
Vulcan Corp., Philadelphia, Pa.
Westinghouse Electric Corp., Pittsburgh, Pa.

Furnaces—Case Hardening, Lead and Cyanide Hardening

Commerce Pattern Foundry & Machine Co., Detroit, Mich.
Continental Industrial Engineers' Co., Chicago, Ill.
Eclipse Fuel Engineer Co., Rockford, Ill.
Falcon Equipment Co., New Brighton, Pa.
General Electric Co., Schenectady, N. Y.
Gordon, Claud S., Co., Chicago, Ill.
Hevi-Duty Electric Co., Milwaukee, Wis.
Holcroft & Co., Detroit, Mich.
Holden, A. F., Co., The, West Haven, Conn.
Hoskins Mfg. Co., Detroit, Mich.
Johnson Gas Appliance Co., Cedar Rapids, Iowa. (Case hardening and lead hardening)
Leeds & Northrup Co., Philadelphia, Pa.
Lindberg Engineering Co., Chicago, Ill.
Mahr Mfg. Co., Division of Diamond Iron Works, Inc., Minneapolis, Minn.
Reliable Gas Products Co., Cedar Rapids, Iowa
Simonski, Gilbert S., Philadelphia, Pa.
Strong, Carlisle & Hammond Co., Cleveland, Ohio
Sunbeam Industrial Furnace Div. Sunbeam Corp., Chicago, Ill.
Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

FURNACES, Preheating, Annealing, Stress-Relieving

Ajax Electric Co., Inc., Philadelphia, Pa.
Ajax Electrothermic Corp., Trenton, N. J.
Combustion Control Corp., Cambridge, Mass. (Stress-Relieving only)
Commerce Pattern Foundry & Machine Co., Detroit, Mich.
Continental Industrial Engineers' Co., Chicago, Ill.
Despatch Oven Co., Minneapolis, Minn.
Drever Co., Philadelphia, Pa.
Eclipse Fuel Engineering Co., Rockford, Ill.
Eisler Engineering Co., Newark, N. J.
Electric Arc, Inc., Newark, N. J.
Falcon Equipment Co., New Brighton, Pa.
Gas Appliance Service, Inc., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Gordon, Claud S., Co., Chicago, Ill.
Hayes, Inc., C. I., Providence, R. I.
Hevi-Duty Electric Co., Milwaukee, Wis.
Holcroft & Co., Detroit, Mich.
Holden, A. F., Co., The, West Haven, Conn.
Hoskins Mfg. Co., Detroit, Mich.
Lindberg Engineering Co., Chicago, Ill.
Mahr Mfg. Co., Div. of Diamond Iron Works, Inc., Minneapolis, Minn.
Metal Bond Mfg. Co., St. Louis, Mo.
R-S Products Corp., Philadelphia, Pa.
Simonski, Gilbert S., Philadelphia, Pa.
Surface Combustion Corp., Toledo, Ohio
Sunbeam Industrial Furnace Div. Sunbeam Corp., Chicago, Ill.
Tate, Jones & Co., Pittsburgh, Pa.
Thermo Electric Mfg. Co., Dubuque, Iowa
Unique Mfg. Co., Inc., Chicago, Ill.
Vulcan Corp., Philadelphia, Pa.
Westinghouse Electric Corp., Pittsburgh, Pa.
Young Bros. Co., Detroit, Mich.

GALVANIZING COMPOUNDS

(See: "Compounds, Galvanizing")

GAMMA-RAY EQUIPMENT

(See: "Inspection Equipment, Radium" and "Radium, Inspection")

GAUGES, Oxygen and Acetylene

Air Reduction Sales Co., New York, N. Y.
Amer. Gas & Chemical Corp., Harrison, N. J.
American Mach. & Metals, Inc., East Moline, Ill.
American Oxygen Service Corp., Harrison, N. J.
Arc Welding Supply Co., Bronx, N. Y.
Bastian-Blessing Co., Chicago, Ill.
Burdett Oxygen Co., Cleveland, Ohio
Craftsweld Equipment Corp., Long Island City, N. Y.
Crane Co., Chicago, Ill.
Dockson Corp., Detroit, Mich.
Electric Auto-Lite Co., Toledo, Ohio
Eutectic Welding Alloys Corp., New York, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.

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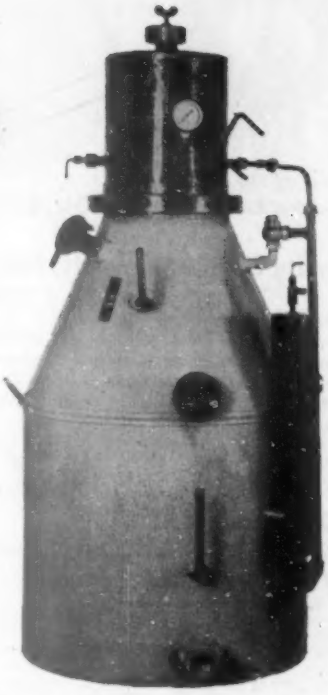

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Harris Calorific Co., Cleveland, Ohio
Imperial Brass Mfg. Co., Chicago, Ill.
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Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
Metallizing Co. of America, Chicago, Ill.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
Nageldinger & Son, J., Inc., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
National Welding Equipment Co., San Francisco, Calif.
Oxweld Railroad Service Co., The, Chicago, Ill.
Smith Welding Equipment Corp., Minneapolis, Minn.
Superior Industrial Gas Corp., Astoria, N. Y.
Superior Oxy-Acetylene Mach. Co. Hamilton, Ohio
U. S. Gauge Co., Div. American Machine and Metals, Inc., Sellersville, Pa.
Victor Equipment Co., San Francisco, Calif.
Weldit, Inc., Detroit, Mich.
Witt Gauge Co., Div. of National Pressure Cooker Co., Eau Claire, Wis.

GAUGES, Weld-Measuring

Air Reduction Sales Co., New York, N. Y.
American Oxygen Service Corp., Harrison, N. J.
Burdett Oxygen Co., Cleveland, Ohio
Chicago Tool & Engrg. Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
K-G Welding & Cutting Co., Inc., New York, N. Y.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Metro Manufacturing Co., Long Island City, N. Y.
Nageldinger & Son, J., Inc., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
Oxweld Railroad Service Co., The, Chicago, Ill.
Scherr Co., Inc., George, New York, N. Y.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Thompson Engineering Co., The, Grand Rapids, Mich.
Victor Equipment Co., San Francisco, Calif.
Weldit, Inc., Detroit, Mich.
Westinghouse Elec. Corp., Pittsburgh, Pa.
Williams & Co., Inc., Pittsburgh, Pa.

GENERATORS, Acetylene

Adler Mfg. Co., Chicago, Ill.
Air Products, Inc., Allentown, Pa.
Air Reduction Sales Co., New York, N. Y.
Allmand Bros. Mfg. Co., Holdrege, Nebr.
Amer. Gas & Chemical Corp., Harrison, N. J.
Amer. Oxygen Service Corp., Harrison, N. J.
Burdett Oxygen Co., The, Cleveland, Ohio
Eutectic Welding Alloys Corp., New York, N. Y.
Harris Calorific Co., Cleveland, Ohio
Independent Engineering Co., O'Fallon, Ill.

(Continued on Page 76)

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GENERATORS, Acetylene

(Continued from Page 75)

Linde Air Products Co., The, New York, N. Y.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Miles, John R. R., Inc., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
Oxweld Railroad Service Co., The, Chicago, Ill.
Reiner & Campbell Co., Inc., Elizabeth, N. J.
Sight Feed Generator Co., Richmond, Ind.
Smith Welding Equipment Corp., Minneapolis, Minn.
Superior Air Products Co., Newark, N. J.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Thompson Engineering Co., The, Grand Rapids, Mich.
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Welderz-Frend Generator Co., Lubbock, Texas

GENERATORS, Hydrogen

Air Products, Inc., Allentown, Pa.
Amer. Gas & Chemical Corp., Harrison, N. J.
Amer. Oxygen Service Corp., Harrison, N. J.
General Electric Co., Schenectady, N. Y.
Girdler Corp., The, Louisville, Ky.
Independent Engineering Co., O'Fallon, Ill.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.

GENERATORS, Oxygen

Air Products, Inc., Allentown, Pa.
Amer. Gas & Chemical Corp., Harrison, N. J.
American Oxygen Service Corp., Harrison, N. J.
Independent Engineering Co., Inc., O'Fallon, Ill.
Modern Engineering Co., Inc., St. Louis, Mo.
Superior Air Products Co., Newark, N. J.

GENERATORS, Welding, A-C

Burdett Oxygen Co., Cleveland, Ohio
Electric Arc, Inc., Newark, N. J.
Gaston Power Tools, Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Brothers Co., Troy, Ohio
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Modern Engineering Co., Inc., St. Louis, Mo.
Williams & Co., Inc., Pittsburgh, Pa.

GENERATORS, Welding, D-C

Air Reduction Sales Co., New York, N. Y.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Century Electric Co., St. Louis, Mo.
Couse Laboratories, Newark, N. J.
Electric Arc, Inc., Newark, N. J.
Gaston Power Tools, Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Graybar Electric Co., New York, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Independent Engineering Co., O'Fallon, Ill.
LeJay Mfg. Co., Minneapolis, Minn.
Lincoln Electric Co., The, Cleveland, Ohio
MacDermid, Inc., Waterbury, Conn.
Miller Elec. Mfg. Co., Inc., Appleton, Wis.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
Progressive Welder Co., Detroit, Mich.
Victor Equipment Co., San Francisco, Calif.
Welding Service Sales, Inc., San Francisco, Calif.
Westinghouse Elec. Corp., Pittsburgh, Pa.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., Inc., New York, N. Y.

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Carter-Lockhard Co., Los Angeles, Calif.
Corning Glass Works, Corning, N. Y.
Culver Glass Specialties, Inc., New York, N. Y.
Holcomb Safety Garments Co., Chicago, Ill.
Industrial Products Co., Philadelphia, Pa.
Owens-Corning Fiberglas Corp., Toledo, Ohio
Semon Bache & Co., New York, N. Y.
Welsh Mfg. Co., Providence, R. I.

GLOVES, Asbestos

American Optical Co., Southbridge, Mass.
Candor Glove Co., The, Candor, N. Y.
Eastern Equipment Co., Inc., Willow Grove, Pa.
General Detroit Corp., The, Detroit, Mich.
General Electric Co., Schenectady, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Greene, Tweed & Co., North Wales, Pa.
Hammond Associates Inc., The, New York, N. Y.
Holcomb Safety Garments Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Janos Asbestos Co., New York, N. Y.
Johns-Manville, New York, N. Y.
Jones, C. Walker Co., Philadelphia, Pa.
Keasbey & Nattison Co., Ambler, Pa.
Linde Air Products Co., The, New York, N.Y.
McDonald, B. F., Co., Los Angeles, Calif.
Metro Manufacturing Co., Long Island City, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Standard Safety Equip. Co., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

GLOVES, Heat and Flame Resistant

American Optical Co., South Bridge, Mass.
Candor Glove Co., The, Candor, N. Y.
General Detroit Corp., The, Detroit, Mich.
General Scientific Equip. Co., Philadelphia, Pa.
Holcomb Safety Garments Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Jones, C. Walker Co., Philadelphia, Pa.
Linde Air Products Co., The, New York, N. Y.
Metro Manufacturing Co., Long Island City, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Oxweld Railroad Service Co., The, Chicago, Ill.
Standard Safety Equip. Co., Chicago, Ill.
Streichert, E. J., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

GLOVES, Leather

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
American Agile Corp., Cleveland, Ohio
American Optical Co., Southbridge, Mass.
Arc Welding Supply Co., Bronx, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Candor Glove Co., The, Candor, N. Y.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Eutectic Welding Alloys Corp., New York, N. Y.
General Eelectric Co., Schenectady, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Hammond Associates, Inc., The, New York, N. Y.
Hanover Glove Co., Inc., Hanover, Pa.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Kriewalt Specialty Mfg. Co., Oconto, Wis.
Linde Air Products Co., The, New York, N.Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
McDonald, B. F., Co., Los Angeles, Calif.
Metro Manufacturing Co., Long Island City, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Montpelier Glove Co., Montpelier, Ind.
Streichert, E. J., Chicago, Ill.
Tillman & Co., John, Long Beach, Calif.
Trindl Products Ltd., Chicago, Ill.
Universal Leather Co., Berlin, Wis.
Williams & Co., Inc., Pittsburgh, Pa.

GLOVES, Welding

Advance Glove Mfg. Co., Detroit, Mich.
Air Reduction Sales Co., New York, N. Y.
Aljay Manufacturing Co., Inc., Philadelphia, Pa.
Allied Weld-Craft, Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
American Agile Corp., Cleveland, Ohio
American Allsafe Co., Inc., Buffalo, N. Y.
American Industrial Safety Equipment, Inc., Brooklyn, N. Y.
American Optical Co., Southbridge, Mass.
Armstrong Supply Co., Philadelphia, Pa.
B & H Welders Supplies, Portsmouth, Va.
Boss Mfg. Co., Kewanee, Ill.
Boston Athletic Shoe Co., Cambridge, Mass.

Burdett Oxygen Co., The, Cleveland, Ohio
Candor Glove Co., Candor, N. Y.
Central Steel and Wire Co., Chicago, Ill.
Champion Rivet Co., Cleveland, Ohio
Chicago Eye Shield Co., Chicago, Ill.
Davis Emergency Equip. Co., Inc., Newark, N. J.
Dunn Products, Chicago, Ill.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Ergolyte Mfg. Co., Philadelphia, Pa.
Fibre-Metal Prod. Co., The, Chester, Pa.
General Electric Co., Schenectady, N. Y.
General Scientific Equipment Co., Philadelphia, Pa.
Hammond, Howard S., Co., New York, N. Y.
Hanover Glove Co., Hanover, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Hollup Corp., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Prod. Co., Philadelphia, Pa.
Kimball Safety Prod. Co., Cleveland, Ohio
Kriewaldt Specialty Mfg. Co., Oconto, Wis.
Lincoln Electric Co., Cleveland, Ohio
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
McDonald Co., B. F., Los Angeles, Calif.
Metal & Thermit Corp., New York, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Modern Engineering Co., Inc., St. Louis, Mo.
Montpelier Glove Co., Montpelier, Ind.
National Cylinder Gas Co., Chicago, Ill.
Olympic Glove Co., New York, N. Y.
Oxweld Railroad Service Co., The, Chicago, Ill.
Pulmosan Safety Equip Corp., Brooklyn, N. Y.
Rabin Glove Co., Jersey City, N. J.
Safety Clothing & Equip. Co., Cleveland, Ohio
Sellstrom Mfg. Co., Chicago, Ill.
Singer Leather Clothing Co., Philadelphia, Pa.
Southern Oxygen Co., Inc., Washington, D. C.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Standard Safety Equipment Co., Chicago, Ill.
Steel Sales Corp., Chicago, Ill.
Streichert, E. J., Chicago, Ill.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Tillman, John, & Co., Long Beach, Calif.
Victor Equipment Co., San Francisco, Calif.
Weldit, Inc., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.
Wheeler, F. H., Mfg. Co., Chicago, Ill.
Whitehead Metal Products Co., Inc., New York, N. Y.

GOGGLES, Cover

American Optical Co., Southbridge, Mass.
Arc Welding Supply Co., Bronx, N. Y.
Bullock Co., L. H., Richmond, Calif.
Burdett Oxygen Co., Cleveland, Ohio
Chicago Eye Shield Co., Chicago, Ill.
Dockson Corp., Detroit, Mich.
Eastern Equipment Co., Inc., Willow Grove, Pa.
General Detroit Corp., The, Detroit, Mich.
General Scientific Equip. Co., Philadelphia, Pa.
Linde Air Products Co., The, New York, N.Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Metro Manufacturing Co., Long Island City, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Modern Engineering Co., Inc., St. Louis, Mo.
Sellstrom Mfg. Co., Chicago, Ill.
Standard Safety Equip. Co., Chicago, Ill.
Watchemoket Optical Co., Inc., Providence, R. I.
Welsh Mfg. Co., Providence, R. I.
Williams & Co., Inc., Pittsburgh, Pa.
Willson Products, Inc., Reading, Pa.

GOGGLES—Spectacle Type with Side Shield

American Optical Co., Southbridge, Mass.
Arc Welding Supply Co., Bronx, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Chicago Eye Shield Co., Chicago, Ill.
Dockson Corp., Detroit, Mich.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Eutectic Welding Alloys Corp., New York, N. Y.
General Electric Co., Schenectady, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Linde Air Products Co., The, New York, N.Y.
Liquid Carbide Corp., The, Wall Chem. Div., Chicago, Ill.
McDonald, B. F., Co., Los Angeles, Calif.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Manufacturing Co., Long Island City, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Modern Engineering Co., Inc., St. Louis, Mo.

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Welsh Mfg. Co., Providence, R. I.
Williams & Co., Inc., Pittsburgh, Pa.
Willson Products, Inc., Reading, Pa.

GOGGLES—Chippers'

American Optical Co., Southbridge, Mass.
Arc Welding Supply Co., Bronx, N. Y.
Boyer-Campbell Co., The, Detroit, Mich.
Burdett Oxygen Co., Cleveland, Ohio
Chicago Eye Shield Co., Chicago, Ill.
Dockson Corp., Detroit, Mich.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Flood Safety Products Co., Chicago, Ill.
General Scientific Equip. Co., Phila., Pa.
Liquid Carbide Corp., The, Wall Chem. Div., Chicago, Ill.
McDonald, B. F., Co., Los Angeles, Calif.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Manufacturing Co., Long Island City, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Modern Engineering Co., Inc., St. Louis, Mo.
Sellstrom Mfg. Co., Chicago, Ill.
Trindl Products Ltd., Chicago, Ill.
Univis Lens Co., The, Dayton, Ohio
Watchemoket Optical Co., Inc., Providence, R. I.
Welsh Mfg. Co., Providence, R. I.
Williams & Co., Inc., Pittsburgh, Pa.
Willson Products, Inc., Reading, Pa.

GOGGLES, Welding

Air Reduction Sales Co., New York, N. Y.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
American Allsafe Co., Inc., Buffalo, N. Y.
American Industrial Safety Equipment, Inc., Brooklyn, N. Y.
American Optical Co., Southbridge, Mass.
American Oxygen Service Corp., Harrison, N. J.
Arc Welding Supply Co., Bronx, N. Y.
Bastian-Blessing Co., Chicago, Ill.
Bausch & Lomb Optical Co., Rochester, N. Y.
Boyer-Campbell Co., The, Detroit, Mich.
Buegeleisen, Harry, Inc., Brooklyn, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Carter Lockard Co., Los Angeles, Calif.
Central Steel and Wire Co., Chicago, Ill.
Champion Rivet Co., Cleveland, Ohio
Chicago Eye Shield Co., Chicago, Ill.
Davis Emergency Equip. Co., Inc., Newark, N. J.
Dockson Corp., Detroit, Mich.

(Continued on Page 78)

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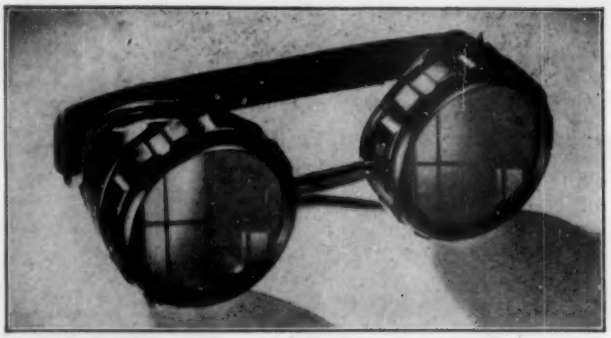

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GOGGLES, WELDING

(Continued from Page 77)

Dunn Products, Chicago, Ill.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Eastern Safety Equipment Co., New York, N. Y.
Electric Eye Equipment Co., Danville, Ill.
Eutectic Welding Alloys Corp., New York, N. Y.
Flood Safety Products Co., Chicago, Ill.
General Detroit Corp., The, Detroit, Mich.
General Electric Co., Schenectady, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Hollup Corp., Chicago, Ill.
Imperial Brass Mfg. Co., Chicago, Ill.
Industrial Prod. Co., Philadelphia, Pa.
Jackson Products, Warren, Mich.
K-G Welding and Cutting Co., Inc., New York, N. Y.
Kimball Safety Prod. Co., Cleveland, Ohio
Lincoln Electric Co., Cleveland, Ohio
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
McDonald Co., B. F., Los Angeles, Calif.
Metal Bond Mfg. Co., St. Louis, Mo.
Metro Mfg. Co., Long Island City, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welding Equipment Co., San Francisco, Calif.
Oxweld Railroad Service Co., The, Chicago, Ill.
Parker Safety Equip. Co., Irvington, N. J.
Pulmosan Safety Equip. Corp., Brooklyn, N. Y.
Safety Clothing & Equip. Co., Cleveland, Ohio
Sellstrom Mfg. Co., Chicago, Ill.
Southern Oxygen Co., Inc., Washington, D. C.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Standard Safety Equip. Co., Chicago, Ill.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Topeka Fdry. & Iron Wks., Topeka, Kan.
Trex Engineering Supply Co., Newark, N. J.
Trindl Products, Ltd., Chicago, Ill.
Universal Power Corp., Cleveland, Ohio
Univis Lens Co., The, Dayton, Ohio
Victor Equipment Co., San Francisco, Calif.
Watchemoket Optical Co., Inc., Providence, R. I.
Welding Alloys Mfg. Co., Newark, N. J.
Weldit, Inc., Detroit, Mich.
Welsh Mfg. Co., Providence, R. I.
Westinghouse Electric Corp., Pittsburgh, Pa.
Williams & Co., Inc., Pittsburgh, Pa.
Willson Products, Inc., Reading, Pa.

GOVERNORS, Gas Engine

Air Reduction Sales Co., New York, N. Y.
Candee's Machine Shop, Los Angeles Calif.
Electric Arc., Inc., Newark, N. J.
Lincoln Electric Co., Cleveland, Ohio
Peterson Welding Lab., Kansas City, Mo.
Pierce Governor Co., Inc., The, Anderson, Ind.
Welding Engineering Co., Milwaukee, Wis.
Westinghouse Electric Corp., Pittsburgh, Pa.
Wilson Welder & Metals Co., Inc., New York, N. Y.

GRAINS, Abrasive

Behr-Manning Corp., Troy, N. Y.
Carborundum Co., Niagara Falls, N. Y.
Macklin Co., Jackson, Mich.
Minnesota Mining & Mfg. Co., St. Paul, Minn.
Norton Co., Worcester, Mass.,
Simonds Abrasive Co., Philadelphia, Pa.

GRINDERS, Abrasive Belt

Aronson Machine Co., Arcade, N. Y.
Behr-Manning Corp., Troy, N. Y.
Black & Decker Mfg. Co., The, Towson, Md.
Buehler Ltd., Chicago, Ill.
Divine Brothers Co., Utica, N. Y.
Fox Grinders, Inc., Pittsburgh, Pa.
Hammond Machinery Builders, Inc., Kalamazoo, Mich.
Independent Pneumatic Tool Co., Aurora, Ill.
Jones Engineering Co., Ellwood City, Pa.
MacDermid, Inc., Waterbury, Conn.
Minnesota Mining and Mfg. Co., St. Paul, Minn.
Peterson Welding Laboratories, Kansas City, Mo.
Porter-Cable Machine Co., Syracuse, N. Y.
Ryman Engineering Co., Ellwood City, Pa.
Standard Elec. Tool Co., The, Cincinnati, Ohio
Walls Sales Corp., New York, N. Y.

GRINDERS, Bench and Floor, Belt Driven

Aristo Power Tools, Inc., Chicago, Ill.
Cincinnati Electrical Tool Co., The, Cincinnati, Ohio
Clizbe Bros. Mfg. Co., Plymouth, Ind.
Cutter Machine Co., St. Louis, Mo.
Delta Mfg. Division of Rockwell Mfg. Co., Milwaukee, Wis.
Divine Brothers Co., Utica, N. Y.
Duro Metal Products Co., Chicago, Ill.
Goodell-Pratt Co., Division of Millers Falls Co., Greenfield, Mass.
Hammond Machinery Builders, Inc., Kalamazoo, Mich.
Hisey-Wolf Mach. Co., The, Cincinnati, Ohio
Independent Pneumatic Tool Co., Chicago, Ill.
Lee, K. O., Co., Aberdeen, S. D.
Millers Falls Co., Greenfield, Mass.
Misener Mfg. Co., Inc., Syracuse, N. Y.
Porter-Cable Mach. Co., Syracuse, N. Y.
Ryerson, Joseph T., & Sons, Inc., Chicago, Ill.
Standard Electrical Tool Co., The, Cincinnati, Ohio
United States Electrical Tool Co., Cincinnati, Ohio
Walker-Turner Co., Inc., Plainfield, N. J.

GRINDERS, Electric, Bench and Floor

Albertson & Co., Inc., Sioux City, Iowa
Aro Equipment Co.p., The, Bryan, Ohio
Atlas Press Co., Kalamazoo, Mich.
Baldor Electric Co., St. Louis, Mo.
Black & Decker Mfg. Co., The, Towson, Md.
Bradford Machine Tool Co., The, Cincinnati, Ohio
Champion Blower and Forge Co., Lancaster, Pa.
Cincinnati Electrical Tool Co., The, Cincinnati, Ohio
Clark, James, Jr., Electric Co., Louisville, Ky.
Clizbe Bros. Mfg. Co., Plymouth, Ind.
Cutter Machine Co., St. Louis, Mo. (Floor only)
Delta Mfg. Division of The Rockwell Mfg. Co., Milwaukee, Wis.
Dumore Co., The, Racine, Wis.
Foley Mfg. Co., Minneapolis, Minn.
Hammond Machinery Builders, Inc., Kalamazoo, Mich.
Hisey-Wolf Mach. Co., The, Cincinnati, Ohio
Hobart Brothers Co., Cincinnati, Ohio
Independent Pneumatic Tool Co., Aurora, Ill.
Mall Tool Co., Chicago, Ill.
Master Electric Co., The, Dayton, Ohio
Millers Falls Co., Inc., Greenfield, Mass.
Milwaukee Electric Tool Corp., Milwaukee, Wis.
Misener Mfg. Co., Inc., Syracuse, N. Y.
Peterson Welding Laboratories, Kansas City, Mo.
Porter-Cable Mach. Co., Syracuse, N. Y.
Pratt & Whitney, Div., Niles-Bement-Pond Co., West Hartford, Conn.
Ryerson, J. T., & Sons, Inc., Chicago, Ill.
Skilsaw, Inc., Chicago, Ill.
Speedway Mfg. Co., Cicero, Ill.
Standard Electrical Tool Co., The, Cincinnati, Ohio
Stanley Electric Tool Division, The Stanley Works, New Britain, Conn.
Stow Manufacturing Co., Inc., Binghamton, N. Y.
United States Electrical Tool Co., The, Cincinnati, Ohio
Valley Electric Corp., St. Louis, Mo.
Van Dorn Elec. Tool Co., The, Towson, Md.
Walker-Turner Co., Inc., Plainfield, N. J.

GRINDERS, Bench and Pedestal

Aget-Detroit Co., Ann Arbor, Mich.
Aristo Power Tools, Inc., Chicago, Ill.
Black & Decker Mfg. Co., The, Towson, Md.
Bradford Machine Tool Co., The, Cincinnati, Ohio
Bridgeport Safety Emery Wheel Co., Bridgeport, Conn.
Buehler Ltd., Chicago Cincinnati Electrical Tool Co., The, Cincinnati, Ohio
Cleveland Pneumatic Tool Co., The, Cleveland, Ohio
Divine Brothers Co., Utica, N. Y.
DoAll Co., The, Des Plaines, Ill.
Elliott Mfg Co., Binghamton, N. Y.
Hobart Bros. Co., Troy, Ohio
Independent Pneumatic Tool Co., Chicago, Ill.
MacDermid, Inc., Waterbury, Conn.
Metallizing Co. of America, Chicago, Ill.
Peterson Welding Laboratories, Kansas City, Mo.
Porter-Cable Machine Co., Syracuse, N. Y.
Skilsaw, Inc., Chicago, Ill.
Smith, A. O., Corp., Milwaukee, Wis.
Standard Electrical Tool Co., The, Cincinnati, Ohio
Stanley Elec. Tool Div., New Britain, Conn.
Stoody Co., Whittier, Calif.

Stow Mfg. Co., Binghamton, N. Y.
United States Electrical Tool Co., Inc., The, Cincinnati, Ohio
Van Dorn Electric Tool Co., Towson, Md.
Walls Sales Corp., New York, N. Y.
Wyzenbeek and Staff, Inc., Chicago, Ill.

GRINDERS, Electric, Portable

Albertson & Co., Inc., Sioux City, Iowa.
Aristo Power Tools, Inc., Chicago, Ill.
Black & Decker Mfg. Co., The, Towson, Md.
Bradford Machine Tool Co., The, Cincinnati, Ohio.
Buckeye Tools Corp., Dayton, Ohio.
Chicago Pneumatic Tool Co., New York, N. Y.
Chicago Wheel & Mfg. Co., Chicago, Ill.
Cincinnati Electrical Tool Co., The, Cincinnati, Ohio.
Clark, James, Jr., Electric Co., Louisville, Ky.
Cleveland Pneumatic Tool Co., Cleveland, Ohio.
Dremel Manufacturing Co., Racine, Wis.
Dumore Co., The, Racine, Wis.
Duro Metal Products Co., Chicago, Ill.
Elliott Mfg. Co., Binghamton, N. Y.
Gaston Power Tools, Chicago, Ill.
Graybar Electric Co., New York, N. Y.
Haskins, R. G., Co., Chicago, Ill.
Independent Pneumatic Tool Co., Aurora, Ill.
Jefferson Engineering & Mfg. Co., Detroit, Mich.
Lee, K. O., Co., Aberdeen, S. D.
Master Pneumatic Tool Co., Inc., Orwell, Ohio
McGonegal Manufacturing Co., The, East Rutherford, N. J.
Mall Tool Co., Chicago, Ill.
Master Electric Co., The, Dayton, Ohio
Master Vibrator Co., Dayton, Ohio
Miller Falls Co., Greenfield, Mass.
Milwaukee Electric Tool Corp., Milwaukee, Wis.
Porter-Cable Mfg. Co., Syracuse, N. Y.
Pratt & Whitney, Div. Niles-Bement-Pond Co., West Hartford, Conn.
Rotor Tool Co., The, Cleveland, Ohio
Skilsaw, Inc., Chicago, Ill.
Smith Corp., A. O., Milwaukee, Wisc.
Speedway Mfg. Co., Cicero, Ill.
Spring Specialty Co., Maywood, Ill.
Standard Electrical Tool Co., The, Cincinnati, Ohio
Stanley Electric Tool Division, The Stanley Works, New Britain, Conn.
Stoody Co., Whittier, Calif.
Stow Manufacturing Co., Inc., Binghamton, N. Y.
Syntron Co., Homer City, Pa.
United States Electrical Tool Co., The, Cincinnati, Ohio
U. S. Steel Supply Co., Chicago, Ill.
Van Dorn Electric Tool Co., The, Towson, Md.
Wodack Electric Tool Corp., Chicago, Ill.
Wyzenbeek & Staff, Inc., Chicago, Ill.

GRINDERS, Flexible Shaft

Albertson & Co., Sioux City, Iowa.
Aristo Power Tools, Inc., Chicago, Ill.
Bradford Machine Tool Co., The, Cincinnati, Ohio
Dumore Co., The, Racine, Wis.
Duro Metal Products Co., Chicago, Ill.
Elliott Mfg. Co., Binghamton, N. Y.
Foredom Electric Co., New York, N. Y.
Jefferson Engineering & Mfg. Co., Detroit, Mich.
Mall Tool Co., Chicago, Ill.
Master Electric Co., The, Dayton, Ohio
Master Vibrator Co., Dayton, Ohio
Porter-Cable Mfg. Co., Syracuse, N. Y.
Pratt & Whitney, Div. Niles-Bement-Pond Co., West Hartford, Conn.
Stanley Electric Tool Division, The Stanley Works, New Britain, Conn.
Stoody Co., Whittier, Calif.
Stow Manufacturing Co., Binghamton, N. Y.
Strand, N. A., & Co., Chicago, Ill.
Swartz & White Mfg. Co., Binghamton Flexible Shaft Division, Binghamton, N. Y.
United States Electrical Tool Co., The, Cincinnati, Ohio
Walker-Turner Co., Inc., Plainfield, N. J.
Wyzenbeek & Staff, Inc., Chicago, Ill.

GRINDERS, Portable, Pneumatic

Aro Equipment Corp., The, Bryan, Ohio
Buckeye Tools Corp., Dayton, Ohio
Overly, Chas F. Co., Cleveland, Ohio
Chicago Pneumatic Tool Co., New York, N. Y.
Cleo Div., Reed Roller Bit Co., Houston, Texas
Cleveland Pneumatic Tool Co., The, Cleveland, Ohio
Ideal Industries, Inc., Sycamore, Ill.
Independent Pneumatic Tool Co., Aurora, Ill.
Ingersoll-Rand Co., New York, N. Y.
Keller Tool Co., Grand Haven, Mich.
M-B Products, Detroit, Mich.
Metallizing Co. of America, Chicago, Ill.
Rotor Tool Co., Cleveland, Ohio
Ryerson, Joseph T. & Son, Inc., Chicago, Ill.
Schramm, Inc., West Chester, Pa.
Sheldon Machine Co., Chicago, Ill.

GRINDING WHEELS
(See: "Wheels Grinding")

GRIT-BLASTING EQUIPMENT

Metallizing Co. of America, Inc., Chicago, Ill.
Metallizing Engineering Co., Inc., Long Island City, N. Y.
Norton Co., Worcester, Mass.
Paasche Airbrush Co., Chicago, Ill.
Parsons Engr. Corp., Cleveland, Ohio.
Vacu-Blaster Co., The, San Francisco, Calif.
Wallen Mfg. Co., G. J., San Francisco, Calif.

GROUND CLAMPS
(See: "Clamps, Ground")

GUARDS, Finger

American Optical Co., Southbridge, Mass.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Eastern Safety Equipment Co., New York, N. Y.
Holcomb-Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Mine Safety Appliances Co., Pittsburgh, Pa.
Pulmosan Safety Equipment Corp., Brooklyn, N. Y.
Safety Clothing & Equip. Co., Cleveland, Ohio
Standard Safety Equipment Co., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Wheeler, F. H. Mfg. Co., Chicago, Ill.

GUARDS and SAFETY APPLIANCES, Machinery

Atkins, E. C. & Co., Indianapolis, Ind.
Benjamin Electric Manufacturing Co., Des Plaines, Ill.
Boyer-Campbell Co., The, Detroit, Mich.
Bullard, E. D., Co., San Francisco, Cal.
Chicago Eye Shield Co., Chicago, Ill.
Clizbe Bros. Mfg. Co., Plymouth, Ind.
Industrial Products Co., Philadelphia, Pa.
Pulmosan Safety Equipment Corp., Brooklyn, N. Y.
Ripley Co., Inc., Middletown, Conn.
Safety Equipment Service Co., Cleveland, Ohio
Schrader's, A., Son, Division of Scovill Manufacturing Co., Inc., Brooklyn, N. Y.
Stanley Electric Tools, Division, The Stanley Works, New Britain, Conn.
Wright-Austin Co., Detroit, Mich.

GUNS, Spot-Welding
(See: "Welders, Gun")

GUNS, Spray

Alemite Div., Stewart-Warner Corp., Chicago, Ill.
Binks Manufacturing Co., Chicago, Ill.
Black Mfg. Co., The, Baltimore, Md.
DeVilbiss Co., The, Toledo, Ohio.
Kellogg Div. of The American Brake Shoe Co., Rochester, N. Y.
Paasche Airbrush Co., Chicago, Ill.

HAMMERS, Blacksmiths'

American Agile Corp., Cleveland, Ohio
American Fork & Hoe Co., Cleveland, Ohio
Champion DeArment Co., Meadville, Pa.
Heller Brothers Company, Newark, N. J.
Leetonia Tool Co., The, Leetonia, Ohio
Mayhew Steel Products, Inc., Shelburne Falls, Mass.
Plumb, Fayette R., Inc., Philadelphia, Pennsylvania
Stanley Tools, Division of the Stanley Works, New Britain, Conn.

HAMMERS, Chipping and Scaling (Hand)

Air Reduction Sales Co., New York, N. Y.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
American Agile Corp., Cleveland, Ohio
Arc Welding Supply Co., Bronx, N. Y.
Atlas Welding Accessories Co., Farndale, Mich.
Atlas Welding Accessories Co., Detroit, Mich.
Bernard Welding Equip., Chicago, Ill.
Black & Decker Mfg., Co., The, Towson, Md.
Bonney Forge & Tool Works, Allenton, Pa.
Carter-Lockard Co., Los Angeles, Calif.
Champion De Arment Co., Meadville, Pa.

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Eutectic Welding Alloys Corp., New York, N. Y.
Fairmont Tool and Forging Co., Cleveland, Ohio
Fibre-Metal Products Co., The, Chester, Pa.
Heller Brothers Co., Newark, N. J.
Hollup Corp., Chicago, Ill.
Ideal Industries, Inc., Sycamore, Ill.
Independent Pneum. Tool Co., Chicago, Ill.
Industrial Products Co., Philadelphia, Pa.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
National Cylinder Gas Co., Chicago, Ill.
Overly, Chas F. Co., Cleveland, Ohio
Plumb, Fayette R., Inc., Philadelphia, Pa.
Schramm, Inc., West Chester, Pa.
Smith Corp., A. O., Milwaukee, Wis.
St. Pierre Chain, Worcester, Mass.
Stanley Elec. Tool Div., New Britain, Conn.
Stanley Tools, Div. of the Stanley Works, New Britian, Conn.
Trindl Products Ltd., Chicago, Ill.
Van Dorn Electric Tool Co., The, Towson, Md.
Victor Equipment Co., San Francisco, Calif.
Welding Service Sales, Inc., San Francisco, Calif.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., Inc., New York, N. Y.
Wodack Elec. Tool Corp., Chicago, Ill.

HAMMERS, Electric, Chipping & Scaling

Black & Decker Mfg. Co., Towson, Md.
Chicago Pneumatic Tool Co., New York, N. Y.
Forney Mfg. Co., Ft. Collins, Colo.
Heller Brothers Co., Newark, N. J.
Ind. Pneumatic Tool Co., Aurora, Ill.
Mall Tool Co., Chicago, Ill.
Master Electric Co., The, Dayton, Ohio
Master Vibrator Co., Dayton, Ohio
Miller Falls Co., Greenfield, Mass.
Milwaukee Electric Tool Corp., Milwaukee, Wis.
Stanley Electric Tools, Div. of the Stanley Works, New Britain, Conn.
Syntron Co., Homer City, Pa.
United States Electrical Tool Co., The, Cincinnati, Ohio
Van Dorn Electric Tool Co., The, Towson, Md.
Wodack Electric Tool Corp., Chicago, Ill.

HAMMERS, Machinists'

American Fork & Hoe Co., Cleveland, Ohio
Billings & Spencer Co., The, Hartford, Conn.
Bonney Forge & Tool Works, Allentown, Pa.
Capewell Manufacturing Co., The, Hartford, Conn.
Champion deArment Co., Meadville, Pa.
Duro Metal Products Co., Chicago, Ill.
Greene, Tweed & Co., New York, N. Y.
Heller Brothers Co., Newark, N. J.
Mayhew Steel Products, Inc., Shelburne Falls, Mass.
New Britain Machine Co., The, New Britain, Conn.
Peck, Stow & Wilcox Co., Southington, Conn.
Plumb, Fayette R., Inc., Philadelphia, Pa.
Plomb Tool Co., Los Angeles, Calif.
Stanley Tools, Division of The Stanley Works, New Britain, Conn.

5000 STROKES Per Minute

TO CLEAN YOUR WELDS FASTER BETTER

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Specifications:
Size 8" long. Bore and stroke ⅞" x ⅝". Approx. speed on 100 lbs. pressure, 5000 strokes per minute. Approx. consumption on 100 lbs. air pressure, 5 cu. ft. per minute.

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THE ELGIN MODEL "G" PNEUMATIC HAMMER

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For scaling and cleaning welds, weld peening, die work, chipping operations, all types of chisel work, metal cutting, etc.

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ELGIN, ILLINOIS

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Atlas Welding Accessories Co., Farndale, Mich.
Borm Manufacturing Co., Elgin, Illinois
Bryant Products Distributing Co., Jackson, Mich.
Buckeye Tools Corp., Dayton, Ohio
Chicago Manufacturing & Dist. Co., Chicago, Ill.
Chicago Pneumatic Tool Co., New York, N. Y.
Cleo Div., Reed Roller Bit Co., Houston, Texas
Cleveland Pneumatic Tool Co., The, Cleveland, Ohio
Coast Pneumatic Tool Co., Los Angeles, Calif.
Dallett Co., The, Philadelphia, Pa.
Dow Pneumatic Tool Co., Chicago, Ill.
Heller Bros., Co., The, Newark, N. J.
Ideal Industries, Inc., Sycamore, Ill.
Independent Pneumatic Tool Co., Aurora, Ill.
Ingersoll Rand Co., New York, N. Y.
Keller Tool Co., Grand Haven, Mich.
Master Pneumatic Tool Co., Inc., Orwell, Ohio
Rotor Tool Co., The, Cleveland, Ohio
Salsbury Corp., Los Angeles, Calif.
Schramm, Inc., West Chester, Pa.
Superior Flux Co., Cleveland, Ohio
Superior Manufacturing Co., Cleveland, Ohio
Wen-Lyn Products, Burbank, Calif.

HAMMERS, Weld-Identification

Atlas Welding Accessories Co., Farndale, Mich.

Hand Shields

(See: "Face Shields, Arc & Gas")

HANDLES — Adze, Axe, Hammer and Hatchet, etc.

American Handle Co., Jonesboro, Ark.
Atkins, E. C. & Co., Indianapolis, Ind.
Bruner-Ivory Handle Co., Hope, Ark.
Gallup- Ruffing Handle Co., The, Norwalk, Ohio
Heller Brothers Co., Newark, N. J.
Link, O. P., Handle Co., Salem, Ind.
Plomb Tool Co., Los Angeles, Calif.

HANDLES — File, Chisel, Punch, etc.

American Stamping Co., Battle Creek, Mich.
Atkins, E. C. & Co., Indianapolis, Ind.
Disston, Henry, & Sons, Inc., Tacony, Philadelphia, Pa.
Gallup-Ruffing Handle Co., The, Norwalk, Ohio. (Bit brace handles and knobs).
Heller Brothers Co., Newark, N. J.
Lutz File & Tool Co., Cincinnati, Ohio
Nicholson File Co., Providence, R. I.
Parker-Kalon Corp., New York, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Plomb Tool Co., Los Angeles, Calif.
Quality Tool Corp., New Wilmington, Pa.
Stanley Tools, Division of The Stanley Works, New Britain, Conn.
Wolverine Tool Co., Detroit, Mich.

HANDLES, Soldering Iron

Bernz, Otto, Co., Inc., Rochester, N. Y.
Dymonhard Corp., New York, N. Y.
Gallup-Ruffing Handle Co., The, Norwalk, Ohio
Lutz File & Tool Co., Cincinnati, Ohio
Parker-Kalon Corp., New York, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

HARD-FACING MATERIALS

(See: "Electrodes, Hard Facing;" "Welding Rods, Hard-Facing")

HATS, Safety

Bullard, E. D., Co., San Francisco, Calif.
Chicago Eye Shield Co., Chicago, Ill.
General Detroit Corp., The, Detroit, Mich.
General Scientific Equip. Co., Philadelphia, Pa.
Goodall Rubber Co., Philadelphia, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Products Co., Philadelphia, Pa.
Johns-Manville, New York, N. Y.
McDonald, B. F., Co., Los Angeles, Calif.
Milburn Co., Detroit, Mich.
Mine Safety Appliances Co., Pittsburgh, Pa.
Resistoflex Corp., Belleville, N. J.
Universal Power Corp., Cleveland, Ohio

HEADS, Automatic Arc

(See: "Arc Welders, Automatic")

HELIUM, Compressed

Air Reduction Sales Co., New York, N. Y.
Amer. Gas & Chemical Corp., Harrison, N. J.
American Oxygen Service Corp., Harrison, N. J.
Buckeye Oxygen Co., Canton, Ohio
Burdett Oxygen Co., The, Cleveland, Ohio
Commercial Gas Corp., Wilkes Barre, Pa.
Independent Engineering Co., O'Fallon, Ill.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Chicago, Ill.
Mathieson Co., The, East Rutherford, N. J.
National Welders Supply Co., Charlotte, N. C.
New England Gas Products, Inc., Charlestown, Mass.
Southern Oxygen Co., Inc., Bladensbuurg, Md.
Steele Gases, Inc., Chicago, Ill.
Stuart Oxygen Co., San Francisco, Calif.
Welding Materials, Inc., Lemoyne, Pa.

HELMETS, Arc-Welding

Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft, Inc., Indianapolis, Ind.
American Industrial Safety Equipment, Inc., Brooklyn, N. Y.
American Optical Co., Southbridge, Mass.

Dockson HELMETS

Built for Better Service

. . . a complete line of dependable head and eye protection. Made right—priced right—proved right.

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American Oxygen Service Corp., Harrison, N. J.
Arc Welding Supply Co., Bronx, N. Y.
Borm Mfg. Co., Elgin, Ill.
Boyer-Campbell Co., The, Detroit, Mich.
Bullard E. D., Co., San Francisco, Calif.
Burdett Oxygen Co., Inc., Cleveland, Ohio
Carter-Lockard Co., Los Angeles, Calif.
Cesco Products, Inc., Chicago, Ill.
Chicago Eye Shield Co., Chicago, Ill.
Dockson Corp., Detroit, Mich.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Eastern Safety Equipment Co., N. Y., N. Y.
Electric Eye Equipment Co., Danville, Ill.
Eutectic Welding Alloy Corp., N. Y., N. Y.
Fibre-Metal Prod. Co., The, Chester, Pa.
Flood Safety Prod. Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.
Hobart Brothers Co., Troy, Ohio
Holcomb Safety Garment Co., Chicago, Ill.
Hollup Corp., Chicago, Ill.
Industrial Prod. Co., Philadelphia, Pa.
Kedman Co., Salt Lake City, Utah
Kimball Safety Prod. Co., Cleveland, Ohio
Larkin Lectro Products Co., New York, N. Y.
Lee, K. O. Co., Aberdeen, S. D.
Lincoln Electric Co., The, Cleveland, Ohio
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
McDonald Co., B. F., Los Angeles, Calif.
McFerron-Myers Prod. Co., Cleveland, Ohio
Metro Mfg. Co., Long Island City, N. Y.
Miller Elec. Mfg. Co., Appleton, Wis.
Mine Safety Appliances Co., Pittsburgh, Pa.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
Parker Safety Equip. Co., Irvington, N. J.
Pulmosan Safety Equip. Corp., Bklyn., N. Y.
Safety Clothing & Equip. Co., Cleveland, Ohio
Sellstrom Mfg. Co., Chicago, Ill.
Standard Safety Equipment Co., Chicago, Ill.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Topeka Fdry. & Iron Wks., Topeka, Kan.
Trex Engineering Supply Co., Newark, N. J.
Twentieth Century Mfg. Co., Minneapolis, Minn.
Trindl Products, Ltd., Chicago, Ill.
Universal Welder Corp., Cleveland, Ohio
US Electric Welder Corp., Toledo, Ohio
U. S. Steel Supply Co., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Welding Apparatus Co., Chicago, Ill.
Welding Engineering Co., Milwaukee, Wis.
Weldit, Inc., Detroit, Mich.
Welsh Mfg. Co., Providence, R. I.
Westinghouse Electric Corp., Pittsburgh, Pa.
Wheeler, F. H. Mfg. Co., Chicago, Ill.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wheeler, F. H., Mfg. Co., Chicago, Ill.
Willson Products, Inc., Reading, Pa.
Wilson Welder & Metals Co., Inc., New York, N. Y.

HELMETS, with Safety Hat

Fibre-Metal Products Co., The, Chester, Pa.
Flood Safety Products Co., Chicago, Ill.
General Detroit Corp., The, Detroit, Mich.
General Scientific Equip. Co., Philadelphia, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Kedman Co., Salt Lake City, Utah
Mine Safety Appliances Co., Pittsburgh, Pa.
Sellstrom Mfg. Co., Chicago, Ill.
Standard Safety Equip. Co., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

HELMETS, Sand Blast

American Optical Co., Southbridge, Mass.
Bullard, E. D., Co., San Francisco, Calif.
Chicago Eye Shield Co., Chicago, Ill.
Fibre-Metal Products Co., The, Chester, Pa.
General Electric Co., Merchandise Dept., Bridgeport, Conn.
General Scientific Equip. Co., Philadelphia, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Products Co., Philadelphia, Pa.
MacLeod Co., The, Cincinnati, Ohio
McDonald, B. F., Co., Los Angeles, Calif.
Mine Safety Appliances Co., Pittsburgh, Pa.
Pulmosan Safety Equipment Corp., Brooklyn, N. Y.
Sellstrom Manufacturing Co., Chicago, Ill.
Standard Safety Equipment Co., Chicago, Ill.
Willson Products, Inc., Reading, Pa.

HELMETS, Supplied-Air

American Allsafe Co., Inc., Buffalo, N. Y.
American Optical Co., Southbridge, Mass.
Boyer-Campbell Co., The, Detroit, Mich.
Bullard, E. D., Co., San Francisco, Calif.
Chicago Eye Shield Co., Chicago, Ill.
Davis Emergency Equipment Co., Inc., Newark, N. J.
Dockson Corp., Detroit, Mich.
Fibre-Metal Products Co., The, Chester, Pa.
Flood Safety Products Co., Chicago, Ill.
General Scientific Equipment Co., Philadelphia, Pa.
Industrial Products Co., Philadelphia, Pa.
McDonald Co., B. F., Los Angeles, Calif.
Mine Safety Appliances Co., Pittsburgh, Pa.
Parsons Engineering Corp., Cleveland, Ohio
Pulmosan Safety Equipment Corp., Brooklyn, N. Y.
Safety Clothing and Equipment Co., Cleveland, Ohio
Willson Products, Inc., Reading, Pa.

HIGH FREQUENCY UNITS

(See: "Conversion Units, A-C Arc")

HOISTS, Chain

Chester Hoist Div., National Screw & Mfg. Co., The, Lisbon, Ohio
Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Cleveland Crane & Engineering Co., The, Wickliffe, Ohio
Coffing Hoist Co., Danville, Ill.
Conco Engineering Works, Mendota, Ill.
Ford Chain Block Division of American Chain & Cable Co., Inc., York, Pa.
Harrington Co., The, Philadelphia, Pa.
Jeffrey Manufacturing Co., The, Columbus, Ohio
Manning, Maxwell & Moore, Inc., Shaw-Box Crane & Hoist Division, Muskegon, Mich.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Master Electric Co., The, Dayton, Ohio
Paulsen-Webber Cordage Corp., New York, N. Y.
Philadelphia Chain Block & Mfg. Co., Inc., Philadelphia, Pa.
Reading Chain & Block Corp., Reading, Pa.
Robbins & Myers, Inc., Springfield, Ohio
Round, David, and Son, Cleveland, Ohio
Sasgen Derrick Co., Chicago, Ill.
Stephens-Adamson Mfg. Co., Aurora, Ill.
Taylor, S. G., Chain Co., Hammond, Ind.
Wright Hoist Division of American Chain & Cable Co., Inc., York, Pa.
Yale & Towne Mfg. Co., The (Philadelphia Division), Philadelphia, Pa.

HOISTS, Differential

Chester Hoist Div., National Screw & Mfg. Co., The, Lisbon, Ohio
Chicago Pneumatic Tool Co., New York, N. Y.
Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Cleveland Crane & Engineering Co., The, Wickliffe, Ohio
Coffing Hoist Co., Danville, Ill.
Conco Engineering Works, Mendota, Ill.
Ford Chain Block Division of American Chain & Cable Co., Inc., York, Pa.
Harrington Co., The, Philadelphia, Pa.
Philadelphia Chain Block & Mfg. Co., Inc., Philadelphia, Pa.
Reading Chain & Block Corp., Reading, Pa.
Robbins & Meyers, Inc., Springfield, Ohio
Round, David, and Son, Cleveland, Ohio
Wright Hoist Division of American Chain & Cable Co., Inc., York, Pa.
Yale & Towne Mfg. Co., The (Philadelphia Div.), Philadelphia, Pa.

HOISTS, Electric

American Hoist & Derrick Co., St. Paul, Minn.
Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Cleveland Crane & Engineering Co., The, Wickliffe, Ohio
Coffing Hoist Co., Danville, Ill.
Conco Engineering Work, Mendota, Ill.

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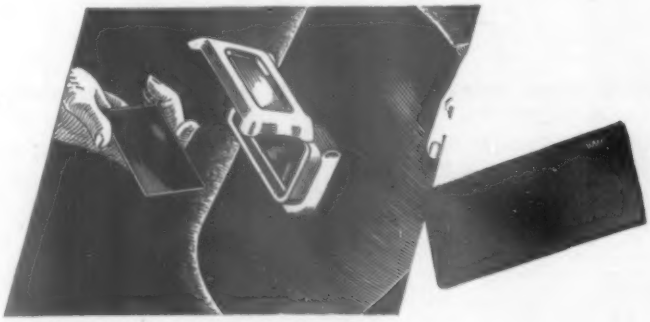

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Detroit Hoist & Machine Co., Detroit, Mich.
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Jeffrey Manufacturing Co., The, Columbus, Ohio
Manning, Maxwell & Moore, Inc., Shaw-Box Crane & Hoist Division, Muskegon, Mich.
Master Electric Co., The, Dayton, Ohio
Northern Engineering Works, Detroit, Mich.
Reading Chain & Block Corp., Reading, Pa.
Robbins & Meyers, Inc., Springfield, Ohio
Round, David, and Son, Cleveland, Ohio
Ryerson, Joseph T. & Sons, Inc., Chicago, Ill.
Sasgen Derrick Co., Chicago, Ill.
Stephens-Adamson Mfg. Co., Aurora, Ill.
Whiting Corp., Harvey, Ill.
Wright Hoist Division of American Chain & Cable Co., Inc., York, Pa.
Yale & Towne Mfg. Co.,The (Philadelphia Division), Philadelphia, Pa.

HOISTS, Geared Trolley

Chester Hoist Div., National Screw & Mfg. Co. The, Lisbon, Ohio
Chicago Pneumatic Tool Co, New York, N. Y.
Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Cleveland Crane & Engineering Co., The, Wickliffe, Ohio
Coffing Hoist Co., Danville, Ill.
Detroit Hoist & Machine Co., Detroit, Mich.
Ford Chain Block Division of American Chain & Cable Co., Inc., York, Pa.
Harnischfeger Corp., Milwaukee, Wis.
Harrington Co., The, Philadelphia, Pa.
Ingersoll-Rand Co., New York, N. Y.
Manning, Maxwell & Moore Inc., Shaw-Box Crane & Hoist Division, Muskegon, Mich.
Master Electric Co., The, Dayton, Ohio
Northern Engineering Works, Detroit, Mich.
Philadelphia Chain Block & Mfg. Co., Inc., Philadelphia, Pa.
Reading Chain & Block Corp., Reading, Pa.
Robbins & Meyers, Inc., Springfield, Ohio
Round, David, and Son, Cleveland, Ohio
Ryerson, Joseph T. & Sons, Inc., Chicago, Ill.
Whiting Corp., Harvey, Ill.
Wright Hoist Division of American Chain & Cable Co., Inc., York, Pa.
Yale & Towne Mfg. Co., The (Philadelphia Division), Philadelphia, Pa.

HOISTS, Hand power

American Hoist & Derrick Co., St. Paul, Minn.
Chester Hoist Div. National Screw & Mfg. Co., The, Lisbon, Ohio
Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Cleveland Crane & Engineering Co., The, Wickliffe, Ohio
Coffing Hoist Co., Danville, Ill.
Conco Engineering Works, Mendota, Ill.
Ford Chain Block Division of American Chain & Cable Co., Inc., Philadelphia, Pa.
Harrington Co., The, Philadelphia, Pa.
Manning, Maxwell & Moore, Inc., Shaw-Box Crane & Hoist Division, Muskegon, Mich.
Paulsen-Weber Cordage Corp., New York, N. Y.
Philadelphia Chain Block & Mfg. Co., Inc., Philadelphia, Pa.
Reading Chain & Block Corp., Reading, Pa.
Robbins & Meyers, Inc., Springfield, Ohio
Round, David, and Son, Cleveland, Ohio
Sasgen Derrick Co., Chicago, Ill.
Stephens-Adamson Mfg. Co., Aurora, Ill.
Whiting Corp., Harvey, Ill.
Wright Hoist Division of American Chain & Cable Co., Inc., York, Pa.
Yale & Towne Mfg. Co., The (Philadelphia Division), Philadelphia, Pa.

HOISTS, Pneumatic

Chicago Pneumatic Tool Co., New York, N. Y.
Curtis Pneumatic Machinery, Div. of Curtis Mfg. Co., St. Louis, Mo.
Detroit Hoist & Machine Co., Detroit, Mich.
Gardner-Denver Co., Quincy, Ill.
Independent Pneumatic Tool Co., Aurora, Ill.
Ingersoll-Rand Co., New York, N. Y.
Keller Toy Co., Gran Haven, Mich.
Market Forge Co., Everett, Mass.
Northern Engineering Works, Detroit, Mich.

HOISTS, Ratchet Lever

Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Coffing Hoist Co., Danville, Ill.
Harrington Co., The, Philadelphia, Pa.
Manning, Maxwell & Moore, Inc., Shaw-Box Crane & Hoist Division, Muskegon, Mich.
Sasgen Derrick Co., Chicago, Ill.
Yale & Towne Mfg. Co., The (Philadelphia Division), Philadelphia, Pa.

HOISTS, Screw Geared

Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Ford Chain Block Division of American Chain & Cable Co., Inc., York, Pa.
Harrington Co., The, Philadelphia, Pa.
Philadelphia Chain Block & Mfg. Co., Inc., Philadelphia, Pa.
Reading Chain & Block Corp., Reading, Pa.
Round, David, and Son, Cleveland, Ohio
Sasgen Derrick Corp., Chicago, Ill.
Wright Hoist Division of American Chain & Cable Co., Inc., York, Pa.
Yale & Towne Mfg. Co., The (Philadelphia Division), Philadelphia, Pa.

HOISTS, Spur Geared

Chester Hoist Div., National Screw & Mfg. Co., The, Lisbon, Ohio
Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Coffing Hoist Co., Danville, Ill.
Conco Engineering Works, Mendota, Ill.
Detroit Hoist & Machine Co., Detroit, Mich.
Ford Chain Block Division of American Chain & Cable Co., Inc., York, Pa.
Harnischfeger Corp., Milwaukee, Wis.
Harrington Co., The, Philadelphia, Pa.
Manning, Maxwell & Moore, Inc., Shaw-Box Crane & Hoist Division, Muskegon, Mich.
Philadelphia Chain Block & Mfg. Co., Inc., Philadelphia, Pa.
Reading Chain & Block Corp., Reading, Pa.
Robbins & Myers, Inc., Hoist & Crane Division, Springfield, Ohio
Round, David, and Son, Cleveland, Ohio
Sasgen Derrick Co., Chicago, Ill.
Weiger Weed Co., Div. of Fansteel Metallurgical Corp., Detroit, Mich.
Whiting Corp., Harvey, Ill.
Wright Hoist Division of American Chain & Cable Co., Inc., York, Pa.
Yale & Towne Mfg. Co., The (Philadelphia Division, Philadelphia, Pa.

HOLDERS, Electrode

(See: "Electrode Holders;" "Arc-Oxygen;" "Atomic Hydrogen;" "Carbon;" "Inert-Gas-Shielded and Resistance.")

HOLDERS, File

American Swiss File & Tool Co., Elizabeth, N. J.
Atkins, E. C. & Co., Indianapolis, Ind.
Disston, Henry & Sons, Inc., Tacony, Philadelphia, Pa.
Nicholson File Co., Providence, R. I.
Plomb Tool Co., Los Angeles, Calif.
Remont Mfg. Co., Lombard, Ill.

HOLDERS, Soapstone

Ragle Industries, Kansas City, Mo.
Randall Mfg. Co., North Kansas City, Mo.

HOODS and MASKS, Dust

American-LaFrance-Foamite Corp., Elmira, N. Y.
American Optical Co., Southbridge, Mass.
Bullard, E. D., Co., San Francisco, Calif.
Chicago Eye Shield Co., Chicago, Ill.
DeVilbiss Co., The, Toledo, Ohio
Dockson Corp., Detroit, Mich.
Goodrich, B. F., Co., The, Akron, Ohio
Industrial Products Co., Philadelphia, Pa.
Milburn Co., The, Detroit, Mich.
Mine Safety Appliances Co., Pittsburgh, Pa.
Paasche Airbrush Co., Chicago, Ill.
Pulmosan Safety Equipment Corp., Brooklyn, N. Y.
Safety Equipment Service Co., The, Cleveland, Ohio
Sellstrom Mfg. Co., Chicago, Ill.
Standard Safety Equipment Co., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

HOOKS, Chain

American Chain Division of American Chain & Cable Co., Inc., York, Pa.
Bethlehem Steel Co., Bethlehem, Pa.
Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
Cleveland Chain & Mfg. Co., Cleveland, Ohio
Durbin-Durco, St. Louis, Mo.
Laughlin, Thomas, Co., Portland, Me.
McKay Co., The, York, Pa.
Newhall Chain Forge & Iron Co., Westwood, N. J.
Paulsen-Weber Cordage Corp., New York, N. Y.
Ryerson, Joseph T. & Son, Inc., Chicago, Ill.
Taylor, S. G., Chain Co., Hammond, Ind.
Upson-Walton Co., The, Cleveland, Ohio
Wilcox, Crittenden & Co., Inc., Middletown, Conn.
Williams, J. H. & Co., Buffalo, N. Y.
Yale & Towne Mfg. Co., The (Philadelphia Division), Philadelphia, Pa.

HOOKS, Hoist, Drop Forged

American Chain Division of American Chain & Cable Co., Inc., York, Pa.
American Chain Ladder Co., Inc., New York, N. Y. (Safety)
Bethlehem Steel Co., Bethlehem, Pa.
Billings & Spencer Co., Hartford, Conn.
Bonney Forge & Tool Works, Allentown, Pa.
Cleveland Chain & Mfg. Co., Cleveland, Ohio
Ford Chain Block Division of American Chain & Cable Co., Inc., Philadelphia, Pa.
Laughlin, Thomas, Co., Portland, Me.
McKay Co., The, York, Pa.
Newhall Chain Forge & Iron Co., Westwood, N. J.
Paulsen-Webber Cordage Corp., New York, N. Y.
Roebling's, John A., Sons Co., Trenton, N. J.
Ryerson, Joseph T. & Sons, Inc., Chicago, Ill.
Taylor, S. G., Chain Co., Hammond, Ind.
Upson-Walton Co., The, Cleveland, Ohio
Wickwire Spencer Steel Division, The Colorado Fuel & Iron Corp., Buffalo, N. Y.
Wilcox, Crittenden & Co., Inc., Middletown, Conn.
Williams, J. H., & Co., Buffalo, N. Y.
Yale & Towne Mfg. Co., The (Philadelphia Division), Philadelphia, Pa.

HOOKS, Pipe, Wire

General Electric Co., Merchandise Dept., Bridgeport, Conn.
Paine Co., The, Chicago, Ill.
Western Wire Products Co., St. Louis, Mo.

HOSE, Clamps

(See: "Clamps, Hose")

HOSE, Fire

American-LaFrance-Foamite Corp., Elmira, N. Y.
General Detroit Corp., The, Detroit, Mich.
Goodridge B. F., Co., The, Akron, Ohio
Hewitt Rubber Div., Hewitt-Robins Inc., Buffalo, N. Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago Ill.
Quaker Rubber Corp., Philadelphia, Pa.
Raybestos-Manhatan, Inc., Passaic, N. J.
Republic Rubber Div., Lee Rubber & Tire Corp., Youngstown, Ohio
United States Rubber Co., New York, N. Y.

HOSE, Oxy-Acetylene

Air Reduction Sales Co., New York, N. Y.
American Brass Co., The, American Metal Hose Branch, Waterbury, Conn.
Amer. Gas & Chemical Corp., Harrison, N. J.
Amer. Oxygen Service Corp., Harrison, N. J.
Arc Welding Supply Co., Bronx, N. Y.
Atlantic Metal Hose Co., Inc., New York, N. Y.
Bastian-Blessing Co., Chicago, Ill.
Black Manufacturing Co., Baltimore, Md.
Boston Woven Hose & Rubber Co., Cambridge, Mass.
Burdett Oxygen Co., Cleveland, Ohio
DeVilbiss Co., The, Toledo, Ohio
Diamond Mechanical Goods Division of The B. F. Goodrich Co., Akron, Ohio
Dockson Corp., Detroit, Mich.
Electric Hose & Rubber Co., Wilmington, Del.
Eutectic Welding Alloys Corp., New York, N. Y.
Gates Rubber Co., Denver, Colo.
General Scientific Equip. Co., Philadelphia, Pa.
Goodall Rubber Co., Philadelphia, Pa.
Goodrich, B. F., Co., The, Akron, Ohio
Goodyear Tire & Rubber Co., Inc., Akron, Ohio
Hewitt Rubber Div. of Hewitt-Robins, Inc., Buffalo, N. Y.
Home Rubber Co., Trenton, N. J.
Imperial Brass Manufacturing Co., Chicago, Ill.
Linde Air Products Co., New York, N. Y.
Liquid Carbonic Corp., The, Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.

Mulconroy Co., Philadelphia, Pa.
Nageldinger & Son, J. Inc., New York, N. Y.
Oxweld Railroad Service Co., Chicago, Ill.
Quaker Rubber Corp., Philadelphia, Pa.
Raybestos Division, The, Raybestos-Manhattan, Inc., Bridgeport, Conn.
Raybestos-Manhattan, Inc., Passaic, N. J.
Republic Rubber Division, Lee Rubber and Tire Corp., Youngstown, Ohio
Sight Feed Generator Co., The, Richmond, Ind.
Thermoid Rubber, Division of Thermoid Co., Trenton, N. J.
Torchweld Equipment Co., Chicago, Ill.
United States Rubber Co., New York, N. Y.
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., Victor Welding Equipment Division, San Francisco, Calif.
Weldit Inc., Detroit, Mich.
Williams & Co., Inc., Pittsburgh, Pa.

HOSE, Sand Blast

American Wheelabrator & Equipment Corp., Mishawaka, Ind.
Boston Woven Hose & Rubber Co., Cambridge, Mass.
Chicago Metal Hose Corp., Maywood, Ill.
Diamond Mechanical Goods Division of The B. F. Goodrich Co., Akron, Ohio
Gates Rubber Co., Denver, Colo.
Goodall Rubber Co., Philadelphia, Pa.
Goodyear Tire & Rubber Co., Inc., Akron, Ohio
Hewitt Rubber Div. of Hewitt-Robins, Inc., Buffalo, N. Y.
Home Rubber Co., Trenton, N. J.
MacLeod Co., The Cincinnati, Ohio
Mulconroy Co., Philadelphia, Pa.
Paasche Airbrush Corp., Philadelphia, Pa.
Quaker Rubber Corp., Philadelphia, Pa.
Raybestos-Manhattan, Inc., Passaic, N. J.
Republic Rubber Division, Lee Rubber and Tire Corp., Youngstown, Ohio
Schramm, Inc., West Chester, Pa.
Thermoid Rubber, Division of Thermoid Co., Trenton, N. J.
United States Rubber Co., New York, N. Y.

HOSE, Steam

American Brass Co., The, Waterbury, Conn.
American Brass Co., The, American Metal Hose Branch, Waterbury, Conn.
Atlantic Metal Hose Co., Inc., New York, N. Y.
Boston Woven Hose & Rubber Co., Cambridge, Mass.
Chicago Metal Hose Corp., Maywood, Ill.
Diamond Mechanical Goods Division of The B. F. Goodrich Co., Akron, Ohio
Gates Rubber Co., Denver, Colo.
Goodall Rubber Co., Philadelphia, Pa.
Goodyear Tire & Rubber Co., Inc., Akron, Ohio
Hewitt Rubber Div. of Hewitt-Robins, Inc., Buffalo, N. Y.
Home Rubber Co., Trenton, N. J.
Ingersoll-Rand Co., New York, N. Y.
Mulconroy Co., Philadelphia, Pa.
Quaker Rubber Corp., Philadelphia, Pa.
Raybestos-Manhattan, Inc., Passaic, N. J.
Republic Rubber Division, Lee Rubber and Tire Corp., Youngstown, Ohio
Thermoid Rubber, Division of Thermoid Co., Trenton, N. J.
United States Rubber Co., New York, N. Y.

HOSE, Ventilating

American Brass Co., The, Waterbury, Conn.
American Brass Co., The, American Metal Hose Branch, Waterbury, Conn.
American Ventilating Hose Co., New York, N. Y.
Arrowhead Rubber Co., Los Angeles, Calif.
Buckeye Oxygen Co., Canton, Ohio
Chicago Metal Hose Corp., Maywood, Ill.
duPont deNemours & Co., Inc., E. I., Fabrics Div., Fairfield, Conn.
Electric Hose & Rubber Co., Wilmington, Del.
Goodyear Tire & Rubber Co., Inc., Akron, Ohio
Lee Rubber & Tire Corp., Youngstown, Ohio
Mulconroy Co., Philadelphia, Pa.
Quaker Rubber Corp., Philadelphia, Pa.
Raybestos-Manhattan, Inc., Passaic, N. J.
United States Rubber Co., New York, N. Y.
Warner Bros. Co., Spiratube Div., Bridgeport, Conn.

HYDROGEN, Compressed

Air Reduction Sales Co., New York, N. Y.
Amer. Gas & Chemical Corp., Harrison, N. J.
Amer. Oxygen Serv. Corp., Harrison, N. J.
Burdett Oxygen Co., Cleveland, Ohio
Commercial Gas Corp., Wilkes-Barre, Pa.
Independent Engineering Co., Inc., O'Fallon, Ill.
Indiana Oxygen Co., Indianapolis, Ind.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
New England Gas Products, Inc., Charlestown, Mass.
Oxweld Railroad Service Co., The, Chicago, Ill.
Steele Gases Inc., Chicago, Ill.
Southern Oxygen Co., Inc., Bladenburg, Md.
Stuart Oxygen Co., San Francisco, Calif.
Superior Industrial Gas Corp., Astoria, N. Y.
Welding Materials, Inc., Lemoyne, Pa.

INCONEL (Standard Mill Forms)

International Nickel Co., Inc., The, New York, N. Y.
Steel Sales Corp., Chicago, Ill.
Superior Tube Co., Norristown, Pa.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

INDUCTION-BRAZING EQUIPMENT

Ajax Electrothermic Corp., Trenton, N. J.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Budd Wheel Co., Induction Heating Div., Detroit, Mich.
Ecco High Frequency Corp., North Bergen, N. J.
Electric Arc, Inc., Newark, N. J.
Federal Electric Co., Inc., Chicago, Ill.
Federal Machine & Welder Co., The, Warren, Ohio
Federal Telephone and Radio Corp., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Gordon Co., Claud S., Chicago, Ill.
Induction Heating Corp., Brooklyn, N. Y.
Illinois Tool Works Electronics Div., Chicago, Ill.
Lepel High Frequency Labs., Inc., New York, N. Y.
Ohio Crankshaft Co., The, Tocco Div., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Welder, Inc., Detroit, Mich.
Weldex, Inc., Detroit, Mich.
Weltronic Co., Detroit, Mich.

INERT-GAS-SHIELDED WELDING EQUIPMENT

(See: "Welders, Arc, Inert Gas Shielded")

INGOTS

(Refer to: Specific Metal)

INSERTS, Tungsten Carbide

American Manganese Steel Div., American Brake Shoe Co., Chicago Heights, Ill.
Haynes Stellite Co., New York, N. Y.
Stoody Co., Whittier, Calif.

INSPECTION EQUIPMENT FLUORESCENT

Magnaflux Corp., Chicago, Ill.
St. John X-Ray Laboratory, Califon, N. J.

INSPECTION EQUIPMENT, Magnetic-Particle

Magnaflux Corp., Chicago, Ill.
RCA Engineering Products Dept., Camden, N. J.
Shrader Co., F. W., Culver City, Calif.

INSPECTION EQUIPMENT, Radium

Canadian Radium & Uranium Corp., New York, N. Y.
Eastman Kodak Co., X-Ray Div., Rochester, N. Y.
Radium Chemical Co., Inc., New York, N. Y.
St. John X-Ray Laboratory, Califon, N. J.

INSPECTION EQUIPMENT, Supersonic

General Electric Co., Schenectady, N. Y.
Magnaflux Corp., Chicago, Ill.
Sperry Products Inc., Hoboken, N. J.

INSPECTION EQUIPMENT, X-Ray

Bar-Ray Products, Inc., Brooklyn, N. Y.
E. I. duPont deNemours & Co., Inc., Pattern Screen Div., Towanda, Pa.
Eastman Kodak Co., X-Ray Div., Rochester, N.Y.
Claude S. Gordon Co., Chicago, Ill.
General Electric X-Ray Corp., Milwaukee, Wis.
Kelley-Koett Mfg. Co., The, Covington, Ky.
Machlett Laboratories, Inc., Springdale, Conn.
North American Philips Co., Inc., New York, N. Y.
Pako Corp., Minneapolis, Minn.
Picker X-Ray Corp., New York, N. Y.
Ray Proof Corp., New York, N. Y.
St. John X-Ray Laboratories, Califon, N. J.
St. John X-Ray Service, Inc., Long Island City, N. Y.
Standard X-Ray Co., Chicago, Ill.
Triplett & Barton, Inc., Burbank, Calif.
Westinghouse Electric Corp., Pittsburgh, Pa.

INSPECTION EQUIPMENT, Weld

(See: "Inspection Equipment, Fluorescent," "Inspection Equipment, Magnetic-Particle," "Inspection Equipment, Radium," "Inspection Equipment, X-Ray" "Gauges, Weld, Measuring" "Lamps, Welding," "Magnifiers, Inspection" and "Radium, Inspection.")

INSTRUMENTS, Training Aids

Automatic Temperature Control Co., Philadelphia, Pa.
Carlton Co., Los Angeles, Calif.
Linde Air Products Co., The, New York, N. Y.
Rapidesign, Inc., Glendale, Calif.
Rubicon Co., Philadelphia, Pa.
Sell, H. H. Elec. Co., Minneapolis, Minn.
Smith, A. O. Corp., Milwaukee, Wis.
Westinghouse Electric Corp., Pittsburgh, Pa.

IRON CEMENT

(See: "Cement, Iron")

IRONS, Soldering

Bastian-Blessing Co., Chicago, Ill.
Bernz, Otto, Co., Inc., Rochester, N. Y.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Electric Soldering Iron Co., Inc., Deep River, Conn.
Hexagon Electric Co., Roselle Park, N. J.
Imperial Brass Mfg. Co., Chicago, Ill.
Johnson Gas Appliance Co., Cedar Rapids, Iowa
Linde Air Products Co., New York, N. Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Mallory, P. R. & Co., Inc., Indianapolis, Ind.
Peck, Stow & Wilcox Co., Southington, Conn.
Reiner & Campbell Co., Inc., Elizabeth, N. J.
Revere Copper & Brass, Inc., New York, N. Y.
Sight Feed Generator Co., The, Richmond, Ind.
Smith Welding Equip. Corp., Minneapolis, Minn.
Stanley Tools, Division of the Stanley Works, New Britain, Conn.
Turner Brass Works, The, Sycamore, Ill.
Vulcan Electrical Co., Lynn, Mass.

IRONS, Soldering, Electric

Belden Mfg. Co., Chicago, Ill.
Electric Soldering Iron Co., Inc., Deep River, Conn.
Forney Mfg. Co., Ft. Collins, Colo.
General Electric Co., Schenectady, N. Y.
Hexacon Electric Co., Roselle Park, N. J.
Ideal Industries Inc., Sycamore, Ill.
Kwikheat Mfg. Co., Glendale, Calif.
Multi-Products Tool Co., Newark, N. J.
Stanley Tools, Division of the Stanley Works, New Britain, Conn.
Sta-Warm Electric Co., Ravenna, Ohio
Vulcan Electric Co., Lynn, Mass.

JACKS, Lifting

Black Hawk Mfg. Co., Milwaukee, Wis.
Buda Co., The, Harvey, Ill.
Coffing Hoist Co., Danville, Ill.
Dudgeon, Richard, Inc., New York, N. Y.
Duff-Norton Mfg. Co., Pittsburgh, Pa
Joyce-Cridland Co., The, Dayton, Ohio
Lewis-Shepard Products, Inc., Watertown, Mass.
Marquette Mfg. Co., Minneapolis, Minn.
Munton Mfg. Co., Franklin Park, Ill.
Reed Eng. Co., Carthage, Mo.
Revolvator Co., North Bergen, N. J.
Templeton, Kenly & Co., Chicago, Ill.
Watson-Stillman Co., Roselle, N. J.

JACKS, Screw

American Scale Co., Kansas City, Mo.
Buda Co., The, Harvey, Ill.
Duff-Norton Mfg. Co., Pittsburgh, Pa.
Joyce-Cridland Co., The, Dayton, Ohio
Templeton, Kenly & Co., Chicago, Ill.

JAWS, Pipe, for Vises

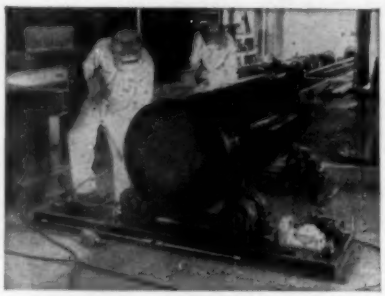
Armstrong Bros. Tool Co., Chicago, Ill.
Columbian Vise & Mfg. Co., The, Cleveland, Ohio
Desmond-Stephan Mfg. Co., Urbana, Ohio
Grand Specialties Co., Chicago, Ill.
Hollands Mfg. Co., Erie, Pa.
Ridge Tool Co., The, Elyria, Ohio

JAWS, Vise

Columbian Vise & Mfg. Co., The, Cleveland, Ohio
Desmond-Stephan Mfg. Co., Urbana, Ohio
Grand Specialties Co., Chicago, Ill.
Parker, Charles Co., The, Meriden, Conn.
Richards-Wilcox Mfg. Co., Aurora, Ill.
Ridge Tool Co., The, Elyria, Ohio
Sherman, H. B., Mfg. Co., Battle Creek, Mich.
Studebaker Machine Co., Maywood, Ill.
Williams, J. H. & Co., Buffalo, N. Y.

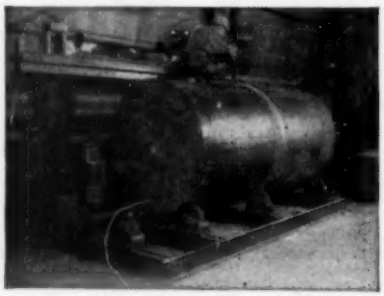
REED ENGINEERED JIGS and FIXTURES

for AUTOMATIC WELDING



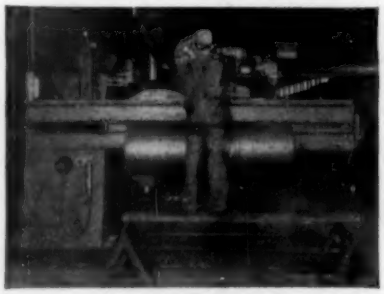
PORTABLE TURNING ROLLS

These rolls are built with variable speed drive and are available in 3-ton, 6-ton, 12-ton, 25-ton and 50-ton sizes. The 3-ton unit illustrated above sells for $875.00 complete with one power and one idler unit F. O. B. factory.



UNIT TYPE TURNING ROLLS

These machines combine both power rotation of work and track support for automatic welding head into one compact unit. Five standard sizes are available for welding tanks up to 10 ft. in diameter.



LONGITUDINAL SEAM WELDER

For high production welding on longitudinal seams, the Reed Horn Type Jig has no equal. This unit combines a copper backup with a mechanical toggle linkage to press the seam absolutely flat prior to welding.

The Above Machines And Many Others Are Shown In Our New Bulletin No. 65. A Copy Will Be Mailed At Your Request.

REED ENGINEERING CO.
CARTHAGE, MISSOURI, U.S.A.

ENGINEERS AND MANUFACTURERS

JIGS and FIXTURES, Welding

Adjustable Clamp Co., Chicago, Ill.
Agnew Electric Co., Milford, Mich.
Allied Weld-Craft, Inc., Indianapolis, Ind.
Bentley Weldery, Inc., Syracuse, N. Y.
Commerce Pattern Foundry & Machine Co., Detroit, Mich.
Connecticut Blower Co., Hartford, Conn.
Cumming Tools, Inc., Kansas City, Mo.
Dallhart Eng. & Mfg. Co., Inc., Van Dyke, Mich.
Garfield Engineering Corp., Kansas City, Mo.
Gouran, Mark F., Philadelphia, Pa.
Hamilton Tool Co., The, Hamilton, Ohio
Hedstrom Industries, Inc., Chicago, Ill.
Martin Electric Co., Detroit, Mich.
McFerron-Myers Prod. Co., Cleveland, Ohio
Multi-Hydromatic Welding & Mfg. Co., East Detroit, Mich.
National Elec. Welding Mach. Co., Bay City, Mich.
Peck, Cecil C. Co., Cleveland, Ohio
Progressive Welder Co., Detroit, Mich.
Rapid-Titan Mfg. Co., Grand Rapids, Mich.
Reed Engineering Co., Carthage, Mo.
Resistance Welder Corp., Detroit, Mich.
Richard Dudgeon, Inc., New York, N. Y.
Stoody Co., Whittier, Calif.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., The, Warren, Ohio
Victory Engineering & Machine Wks., Inc., St. Louis, Mo.
Vogel Tool & Die Corp., Chicago, Ill.
Weldaloy Products Co., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.
Welding Sales & Eng. Co., Detroit, Mich.
Westinghouse Electric Mfg. Co., Pittsburgh, Pa.
Wolverine Tool Co., Detroit, Mich.

JIGS, Hard-Facing

Coast Metals, Inc., Canton, Ohio
Phillips, C. E., & Co., Detroit, Mich.
Kerkling Metals Co., Burbank, Calif.
Ransome Machinery Co., Dunellen, N. J.
Stoody Co., Whittier, Calif.
Wall Colmonoy Corp., Detroit, Mich.

JIGS, Pipe-Welding

Electric Arc, Inc., Newark, N. J.
Jewell Mfg. Co., St. Paul, Minn.
McFerron Myers Prod. Co., Cleveland, Ohio
Midwest Piping & Supply Co., Inc., St. Louis, Mo.
Nelsonville Fdry. & Machine Co., Nelsonville, Ohio
Ransome Machinery Co., Dunellen, N. J.
Reed Engineering Co., Carthage, Mo.
Stoody Co., Whittier, Calif.
Vogel Tool & Die Corp., Chicago, Ill.
Welding Machines Mfg. Co., Detroit, Mich.

JUMPERS

(See: Cables, Resistance Welding)

KITS, Electrode

American Agile Corp., Cleveland, Ohio
Ampco Metal, Inc., Milwaukee, Wis.
Arc Welding Supply Co., Bronx, N. Y
Champion Rivet Co., The, Cleveland, Ohio
Eutectic Welding Alloys Corp., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hollup Corp., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metal & Thermit Corp., New York, N. Y.
Moorewood Electric & Mfg. Co., Los Angeles, Calif.
Westinghouse Electric Corp., Pittsburgh, Pa.

KITS, First Aid

American Allsafe Co., Inc., Buffalo, N. Y.
Bullard, E. D., Co., San Francisco, Calif.
Carter-Lockard Co., Los Angeles, Calif.
Davis Emergency Equip. Co., Inc., Newark, N. J.
Detroit First Aid Co., Detroit, Mich.
Eastern Safety Equipment Co., New York, N. Y.
General Detroit Corp., The, Detroit, Mich.
General Scientific Equip. Co., Philadelphia, Pa.
Industrial Products Co., Philadelphia, Pa.
McDonald Co., B. F., Los Angeles, Calif.
Mine Safety Appliances Co., Pittsburgh, Pa.
Pulmosan Safety Equipment Corp., Brooklyn, N. Y.
Safety Clothing & Equip. Co., Cleveland, Ohio
Standard Safety Equip. Co., Chicago, Ill.

LADLES—Metal Melting, Skimming and Pouring

Aeroil Products Co., West New York, N. J.
American Car and Foundry Co., New York, N. Y.
Bernz, Otto, Co., Inc., Rochester, N. Y.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Diener, Geo. W., Mfg. Co., Chicago, Ill.
Dixon, Joseph, Crucible Co., Jersey City, N. J.
General Detroit Corp., The, Detroit, Mich.
General Scientific Equip. Co., Philadelphia, Pa.
Hollands Mfg. Co., Erie, Pa.
Peck, Stow & Wilcox Co., Southington, Conn. (Metal melting only)
Salem Tool Co., The, Salem, Ohio

LAMPS, Welding and Inspection

General Electric Lamp Works, Cleveland, Ohio
Harmon & Co., Chicago, Ill.
Radiant Lamp Corp., Newark, N. J.
Stevens & Co., Inc, C. H., S. Norwalk, Conn.
Sylvania Electric Products, Inc., New York, N. Y.
Thermacote Co., Los Angeles, Calif.
Westinghouse Lamp Division, Bloomfield, N. J.

LEAD-WELDING EQUIPMENT

Air Reduction Sales Co., New York, N. Y.
American Oxygen Service Corp., Harrison, N. J.
Burdett Oxygen Co., The, Cleveland, Ohio
Craftsweld Equip. Corp., Long Island City, N. Y.
Dockson Corp., Detroit, Mich.
General Electric Co., Schenectady, N. Y.
General Welding & Equip. Co., Boston, Mass.
Goss Gas, Inc., Pittsburgh, Pa.
Harris Calorific Co., Cleveland, Ohio
Imperial Brass Mfg. Co., Chicago, Ill.
Insto-Gas Corp., Detroit, Mich.
K-G Welding & Cutting Co., Inc., New York, N. Y.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welding Equipment Co., San Francisco, Calif.
Oxweld Railroad Service Co., The, Chicago, Ill.
Precision Welder & Machine Co., Cincinnati, Ohio
Smith Welding Equipment Corp., Minneapolis, Minn.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Trindl Products Ltd., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Welders Supply & Mfg. Co., Cincinnati, Ohio
Weldit, Inc., Detroit, Mich.

LEATHER, Weldors'

(See specific item such as: "Aprons," "Capes" and "Coats," "Gloves," "Guard Finger," "Overalls," "Pants," etc.)

LEGGINGS, Asbestos, Fire Resistant Duck, Leather, Etc.

Aljay Mfg. Co., Inc., Philadelphia, Pa.
American Optical Co., Southbridge, Mass.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Fibre-Metal Products Co., The, Chester, Pa.
General Detroit Corp., The, Detroit, Mich.
General Scientific Equip. Co., Philadelphia, Pa.
Greene, Tweed & Co., North Wales, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Products Co., Philadelphia, Pa.
Janos Asbestos Co., New York, N. Y.
Johns-Manville, New York, N. Y.
Keasbey & Mattison Co., Ambler, Pa.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Mine Safety Appliances Co., Pittsburgh, Pa.
National Welders Supply Co., Charlotte, Ohio
Standard Safety Equip. Co., Chicago, Ill.
Universal Welder Corp., Cleveland, Ohio
Williams & Co., Inc., Pittsburgh, Pa.

LENS CLEANERS

American Agile Corp., Cleveland, Ohio
American Allsafe Co., Inc., Buffalo, N. Y.
American Optical Co., Southbridge, Mass.
Carhoff Co., Cleveland, Ohio
Dockson Corp., Detroit, Mich.
General Scientific Equip. Co., Philadelphia, Pa.

Industrial Prod. Co., Philadelphia, Pa.
Kimball Safety Prod. Co., Cleveland, Ohio
Merix Chemical Co., Chicago, Ill.
McDonald Co., Los Angeles, Calif.
Mine Safety Appliances Co., Pittsburgh, Pa.
Oakite Products, Inc., New York, N. Y.
Pulmosan Safety Equipment Corp., Brooklyn, N. Y.
Safety Clothing and Equipment Co., Cleveland, Ohio
Sellstrom Mfg. Co., Chicago, Ill.
Willson Products, Inc., Reading, Pa.

LENS PROTECTORS

Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft, Inc., Indianapolis, Ind.
American Industrial Safety Equipment, Inc., Brooklyn, N. Y.
American Optical Co., Southbridge, Mass.
American Oxygen Service Corp., Harrison, N. J.
Harry Buegeleisen, Inc., Brooklyn, N. Y.
Bullock, L. H., Co., Berkeley, Calif.
Carter-Lockard Co., Los Angeles, Calif.
Champion Rivet Co., Cleveland, Ohio
Chicago Eye Shield Co., Chicago, Ill.
Dockson Corp., Detroit, Mich.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Eastern Safety Equip. Co., New York, N. Y.
Eutectic Welding Alloy Corp., New York, N. Y.
Faulk, F. R., Pittsburgh, Pa.
Fibre-Metal Prod. Co., The, Chester, Pa.
General Electric Co., Schenectady, N. Y.
Hollup Corp., Chicago, Ill.
Hopkins Engineering Co., Glendale, Calif.
Industrial Products Co., Philadelphia, Pa.
Kimball Safety Prod. Co., Cleveland, Ohio
McDonald Co., Los Angeles, Calif.
Mine Safety Appliances Co., Pittsburgh, Pa.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
Parker Safety Equipment Co., Irvington, N. J.
Ragle, J. M., Industries, Kansas City, Mo.
Safety Clothing and Equipment Co., Cleveland, Ohio
Sellstrom Mfg. Co., Chicago, Ill.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Victor Equipment Co., San Francisco, Calif.
Welding Alloys Mfg. Co., Newark, N. J.
Welsh Mfg. Co., Providence, R. I.
Willson Products, Inc., Reading, Pa.
Wilson Welder & Metals Co., Inc., New York, N. Y.

LENSES, Cover

Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft, Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
American Agile Corp., Cleveland, Ohio
American Allsafe Co., Inc., Buffalo, N. Y.
American Industrial Safety Equipment, Inc., Brooklyn, N. Y.
American Optical Co., Southbridge, Mass.
American Oxygen Service Corp., Harrison, N. J.
Arc Welding Supply Co., Bronx, N. Y.
Bausch & Lomb Optical Co., Rochester, N. Y.
Boyer-Campbell Co., Detroit, Mich.
Harry Buegeleisen, Inc., Brooklyn, N. Y.
Bullock Co., L. H., Richmond, Calif.
Burdett Oxygen Co., Cleveland, Ohio
Carter-Lockard Co., Los Angeles, Calif.
Central Steel & Wire Co., Chicago, Ill.
Champion Rivet Co., Cleveland, Ohio
Chicago Eye Shield Co., Chicago, Ill.
Culver Glass Specialties, Inc., New York, N. Y.
Davis Emergency Equip. Co., Inc., Newark, N. J.
Dockson Corp., Detroit, Mich.
Dunn Products, Chicago, Ill.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Ergolyte Mfg. Co., Philadelphia, Pa.
Faulk, F. R., Pittsburgh, Pa.
Fibre-Metal Prod. Co., The, Chester, Pa.
Fish-Schurman Corp., New York, N. Y.
Flood Safety Products Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Hollup Corp., Chicago, Ill.
Hopkins Engineering Co., Glendale, Calif.
Imperial Brass Mfg. Co., Chicago, Ill.
Industrial Prod. Co. Philadelphia, Pa.
Jackson Products, Warren, Mich.
K-G Welding and Cutting Co., Inc., New York, N. Y.
Kimball Safety Prod. Co., Cleveland, Ohio
Larkin Lectro Products, New York, N. Y.
Lincoln Electric Co., The, Cleveland, Ohio
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
McDonald Co., B. F., Los Angeles, Calif.
Metal Bond Mfg. Co., St. Louis, Mo.
Metal & Thermit Corp., New York, N. Y.
Metro Mfg. Co., Long Island City, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
Northeast Metals Co., Philadelphia, Pa.
Oxweld Railroad Service Co., The, Chicago, Ill.
Parker Safety Equipment Co., Irvington, N. J.
Pulmosan Safety Equip. Corp., Brooklyn, N. Y.
Ragle, J. M., Industries, Kansas City, Mo.
Safety Colthing & Equip. Co., Cleveland, Ohio
Sellstrom Mfg. Co., Chicago, Ill.
Semon Bache & Co., New York, N. Y.
Shrader, F. W., Co., Culver City, Calif.
Smith Corp., A. O., Milwaukee, Wis.
Southern Oxygen Co., Inc., Washington, D. C.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Standard Safety Equipment Co., Chicago, Ill.
Steel Sales Corp., Chicago, Ill.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Thermacote Co., Los Angeles, Calif.
Trindl Products Ltd., Chicago, Ill.
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Welding Alloys Mfg. Co., Newark, N. J.
Welding Engineering Co., Milwaukee, Wis.
Weldit, Inc., Detroit, Mich.
Welsh Mfg. Co., Providence, R. I.
Westinghouse Electric Corp., Pittsburgh, Pa.
Williams & Co., Inc., Pittsburgh, Pa.
Willson Products, Inc., Reading, Pa.
Wilson Welder & Metals Co., Inc., New York, N. Y.

LENSES, Goggle

American Optical Co., Southbridge, Mass.
Arc Welding Supply Co., Bronx, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Chicago Eye Shield Co., Chicago, Ill.
Culver Glass Specialties, Inc., New York, N. Y.
Dockson Corp., Detroit, Mich.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Flood Safety Products Co., Chicago, Ill.
General Detroit Corp., The, Detroit, Mich.
General Scientific Equip. Co., Philadelphia, Pa.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Mfg. Co., Long Island City, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Modern Engineering Co., Inc., St. Louis, Mo.
National Welders Supply Co., Charlotte, N. C.
Sellstron Mfg. Co., Chicago, Ill.
Standard Safety Equip. Co., Chicago, Ill.
Univis Lens Co., The, Dayton, Ohio
Welding Alloys Mfg. Co., Newark, N. J.
Welsh Mfg. Co., Providence, R. I.
Williams & Co., Inc., Pittsburgh, Pa.
Willson Products, Inc., Reading, Pa.

LENSES, Helmet

American Agile Corp., Cleveland, Ohio
American Optical Co., Southbridge, Mass.
Arc Welding Supply Co., Bronx, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Chicago Eye Shield Co., Chicago, Ill.
Culver Glass Specialties, Inc., New York, N. Y.
Dockson Corp., Detroit, Mich.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Flood Safety Products Co., Chicago, Ill.
General Detroit Corp., The, Detroit, Mich.
General Electric Co., Schenectady, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Hobart Brothers Co., Troy, Ohio
Industrial Products Co., Philadelphia, Pa.
Lincoln Electric Co., The, Cleveland, Ohio
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Mfg. Co., Long Island City, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Modern Engineering Co., Inc., St. Louis, Mo.
National Welders Supply Co., Charlotte, N. C.
Sellstrom Mfg. Co., Chicago, Ill.
Standard Safety Equip. Co., Chicago, Ill.
Steel Sales Corp., Chicago, Ill.
Trindl Products Ltd., Chicago, Ill.
Welding Alloys Mfg. Co., Newark, N. J.
Welding Engineering Corp., Milwaukee, Wis.
Welsh Mfg. Co., Providence, R. I.
Williams & Co., Inc., Pittsburgh, Pa.
Willson Products, Inc., Reading, Pa.

Are you paying too much for lenses?

• Spending more for lenses than you need to is like throwing money away. Save it, by ordering Amcoweld Protective Lenses that are not only reasonable in cost but also "tops" in quality and service life. All shades — all types (flat, clear and coated) for welders helmets, hand shields, goggles, and spectacles. Prompt delivery.

Write for fully descriptive literature and prices.

EASTERN EQUIPMENT CO., INC.
Industrial Safety Division
WILLOW GROVE, PENNA.
Manufacturers of Amcoweld Products

LENSES, Oxygen and Acetylene Gauges

Allied Weld-Craft Inc., Indianapolis, Ind.
American Industrial Safety Equipment Co., Brooklyn, N. Y.
Arc Welding Supply Co., Bronx, N. Y.
Bastian-Blessing Co., The, Chicago, Ill.
Burdett Oxygen Co., Cleveland, Ohio
Carter-Lockhard Co., Los Angeles, Calif.
Culver Glass Specialties, Inc., New York, N. Y.
Dockson Corp., Detroit, Mich.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Flood Safety Products Co., Chicago, Ill.
General Detroit Corp., The, Detroit, Mich.
K-G Welding and Cutting Co., Inc., New York, N. Y.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
Nageldinger & Sons, J., New York, N. Y.
National Welders Supply Co., Charlotte, N. C.
Oxweld Railroad Service Co., Chicago, Ill.
Plasti-Glass Products Co., Chicago, Ill.
Ragle, J. M., Industries, Kansas City, Mo.
Sellstrom Mfg. Co., Chicago, Ill.
Standard Safety and Equipment Co., Cleveland, Ohio
Standard Safety Equipment Co., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.

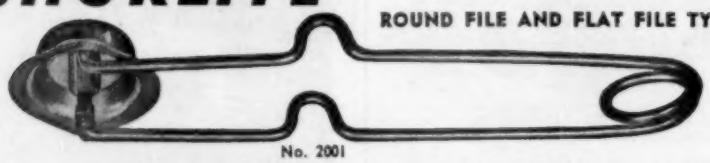
LIGHTERS, Torch

Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft, Inc., Indianapolis, Ind.
American Oxygen Service Corp., Harrison, N. J.
Arc Welding Supply Co., Bronx, N. Y.
Black Mfg. Co., The, Baltimore, Md.
Burdett Oxygen Co., Cleveland, Ohio
Central Steel & Wire Co., Chicago, Ill.
Dockson Corp., Detroit, Mich.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Eutectic Welding Alloy Corp., New York, N. Y.

(Continued on Page 86)

SHURLITE TORCH LIGHTERS and RENEWAL FLINTS

ROUND FILE AND FLAT FILE TYPES



No. 2001

Thirty years of experience are reflected in the simple design and sturdy construction of SHURLITE Lighters. Sharp, keen, round files, with more than one square inch of cutting surface, and large, finest quality flints, just right for maximum ignitions with minimum file wear insure superior service and economy under heavy usage. All materials and workmanship unconditionally guaranteed.

Write for Descriptive Literature and Pric.

G. C. FULLER MANUFACTURING CO.

CENTRAL & OLIVER STREETS CINCINNATI 14, OHIO

This handy, convenient, slide-cover, metal box will open only part way, making it impossible to accidentally spill the contents. Each renewal is slightly countersunk for easy starting on the lighter threads. Renewals will fit other threaded lighters.

LIGHTERS, Torch

(Continued from Page 85)

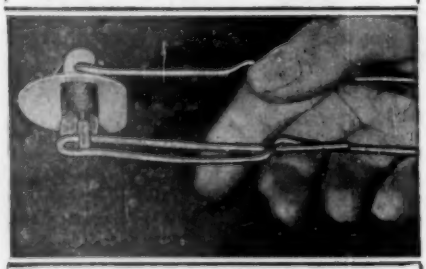
Flint Products Co., The, Brooklyn, N. Y.
Fuller, G. C., Mfg. Co., Cincinnati, Ohio
General Scientific Equip. Co., Philadelphia, Pa.
Hammett Electric Mfg. Co., Kansas City, Mo.
Harris Calorific Co., Cleveland, Ohio
Holden, A. F., Co., The, New Haven, Conn.
Imperial Brass Mfg. Co., Chicago, Ill.
Industrial Prod. Co., Philadelphia, Pa.
K-G Welding & Cutting Co., Inc., New York, N. Y.
Kelly, Geo. J., Inc., Lynn, Mass.
Larkin Lectro Products Co., New York, N. Y.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
Metal Bond Mfg. Co., St. Louis, Mo.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.

RANDALL HOT SPARK LIGHTER

Lights from either side; container on handle holds extra flints. New round file roller has smooth section where flint starts, making it easy to move flint onto file *without flint sticking*. A quick hot spark instantly. Uses standard screw-on flints. Also Wire Handle Lighters and Hot Spark Flints.

RANDALL MANUFACTURING CO.
NORTH KANSAS CITY, MO.

MOST ECONOMICAL



The Improved "Round File" Gas Lighter

Unrivalled economy is provided by the many superior, exclusive design and construction features of the Improved "Round File" lighter. A large file area is provided—approximately one square inch. The file is of superior quality, hardened in our own factory. The spark metal is of large diameter and the patented cartridge holding the metal locks exactly into position, permitting instant replacement. Every part of the lighter is thoroughly tested.

SAFETY GAS LIGHTER CO.
Lynn, Massachusetts
Established 1901

National Welders Supply Co., Charlotte, N. C.
Oxweld Railroad Service Co., The, Chicago, Ill.
Parker Safety Equip. Co., Irvington, N. J.
Ragle, J. M., Industries, Kansas City, Inc.
Randall Mfg. Co., North Kansas City, Mo.
Safety Clothing and Equipment Co., Cleveland, Ohio
Safety Gas Lighter Co., Lynn, Mass.
Shoot-A-Lite Corp., New York, N. Y.
Smith Welding Equipment Corp., Minneapolis, Minn.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Welding and Cutting Materials Co., North Kansas City, Mo.
Weldit Inc., Detroit, Mich.
Williams & Co., Inc., Pittsburgh, Pa.

LIGHTS, Portable Acetylene

Linde Air Products Co., The, New York, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.

LUBRICATORS, Airline

Aro Equipment Corp., Bryan, Ohio
Chicago Pneumatic Tool Co., New York, N. Y.
Cleveland Pneumatic Tool Co., The, Cleveland, Ohio
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
M-B Products Co., Detroit, Mich.
National Carbide Co., Inc., New York, N. Y.
Schrader's, A., Son, Div. of Scovill Mfg. Co., Inc., Brooklyn, N. Y.

LUGS, Welding Cable

Air Reduction Sales Co., New York, N. Y.
Albert & J. M. Anderson Mfg. Co., Boston, Mass.
Allied Weld-Craft, Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Arc Welding Supply Co., Bronx, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Burndy Engineering Co., Inc., New York, N. Y.
Chicago Tool & Engineering Co., Chicago, Ill.
Duro Engineering Co., New Haven, Conn.
Fibre-Metal Prod. Co., The, Chester, Pa.
General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hollup Corp., Chicago, Ill.
Jackson Products, Warren, Mich.
Larkin Lectro Products Co., New York, N. Y.
Lincoln Electric Co., Cleveland, Ohio
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Manufacturing Co., Inc., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
O. Z. Elec. Mfg. Co., Brooklyn, N. Y.
Sherman Mfg. Co., H. B., Battle Creek, Mich.
Tweco Prod. Co., Wichita, Kans.
Universal Power Corp., Cleveland, Ohio
US Electric Welder Corp., Toledo, Ohio
Victor Equipment Co., San Francisco, Calif.
Wagner Mfg. Co., Inc., Jackson, Mo.
Westinghouse Electric Corp., Pittsburgh, Pa.
Williams & Co., Inc., Pittsburgh, Pa.
Will-Weld Mfg. Co., Inc., Omaha, Neb.
Wilson Welder & Metals Co., Inc., New York, N. Y.

MACHINES, Automatic & Submerged Arc Welding

Linde Air Products Co., The, New York, N.Y.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Cecil C., Co., Cleveland, Ohio

MACHINES, Bending, Pipe

(See also: "Benders-Conduit, Pipe and Tubing")

Baldwin Locomotive Works, The, Philadelphia, Pa.
Blackhawk Mfg. Co., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Greenlee Tool Co., The, Rockford, Ill.
Hydraulic Press Mfg. Co., The, Mount Gilead, Ohio
Munton Mfg. Co., Franklin Park, Ill.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Parker Alliance Co., The, Cleveland, Ohio
Parker Appliance Co., The, Cleveland, Ohio
Skinner, M. B., Co., South Bend, Ind.
Studebaker Machine Co., Maywood, Ill.
Watson-Stillman Co., The, Roselle, N. J.

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Baldwin Locomotive Works, The, Philadelphia, Pa.
Blackhawk Mfg. Co., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
Cleveland Crane & Engineering Co., The, Wickliffe, Ohio
Dudgeon, Richard, Inc., New York, N. Y.
Hydraulic Press Mfg. Co., The, Mount Gilead, Ohio
Medart Co., The, St. Louis, Mo.
Munton Mfg. Co., Franklin Park, Ill.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Ryerson, Joseph T., & Son, Inc., Chicago, Ill.
Studebaker Machine Co., Maywood, Ill.
Watson-Stillman Co., The, Roselle, N. J.
Webb Corp., The, Webb City, Mo.

MACHINES, Brazing Gas

Gas Appliance Service, Inc., Chicago, Ill.
Modern Engineering Co., Inc., St. Louis, Mo.
Powder Weld Process Co., The, Brooklyn, N. Y.
Selas Corp. of America, Philadelphia, Pa.

MACHINES, Buffing, Electric, Portable

Black & Decker Mfg. Co., The, Towson, Md.
Bradford Machine Tool Co., The, Cincinnati, Ohio
Buckeye Tools Corp., Dayton, Ohio
Chicago Pneumatic Tool Co., New York, N. Y.
Cincinnati Electrical Tool Co., The, Cincinnati, Ohio
Clark, James, Jr., Electric Co., Louisville, Ky.
Delta Mfg., Division of Rockwell Mfg. Co., Milwaukee, Wis.
Independent Pneumatic Tool Co., Chicago, Ill.
Jefferson Engineering & Mfg. Co., Detroit, Mich.
Mall Tool Co., Chicago, Ill.
Millers Falls Co., Greenfield, Mass.
Milwaukee Electric Tool Corp., Milwaukee, Wis.
Rotor Tool Co., The, Cleveland, Ohio
Skilsaw Inc., Chicago, Ill.
Standard Electrical Tool Co., Cincinnati, Ohio
Stanley Electric Tools, Division The Stanley Works, New Britain, Conn.
Sterling Tool Products Co., Chicago, Ill.
Stow Manufacturing Co., Inc., Binghamton, N. Y.
Swartz & White Mfg. Co., Binghamton Flexible Shaft Division, Binghamton, N. Y.
Syntron Co., Homer City, Pa.
United States Electrical Tool Co., The, Cincinnati, Ohio
Valley Electric Corp., St. Louis, Mo.
Van Dorn Electric Tool Co., The, Towson, Md.
Walker-Turner Co., Inc., Plainfield, N. J.
Wodack Electric Tool Corp., Chicago, Ill.
Wyzenbeek & Staff, Inc., Chicago, Ill.

MACHINES, Buffing, Flexible Shaft

Bradford Machine Tool Co., The, Cincinnati, Ohio
Haskins, R. G., Co., Chicago, Ill.
Jefferson Engineering & Mfg. Co., Detroit, Mich.
Mall Tool Co., Chicago, Ill.
Porter-Cable Mach. Co., Syracuse, N. Y.
Pratt & Whitney, Div., Niles-Bremer-Pond Co., West Hartford, Conn.
Stanley Electric Tools, Division The Stanley Works, New Britain, Conn.
Stow Manufacturing Co., Inc., Binghamton, N. Y.
Strand, N. A., & Co., Chicago, Ill.
Swartz & White Mfg. Co., Binghamton Flexible Shaft Division, Binghamton, N. Y.
United States Electrical Tool Co., The, Cincinnati, Ohio
Wyzenbeek & Staff, Inc., Chicago, Ill.

MACHINES, Buffing, Pneumatic

Aro Equipment Corp., The, Bryan, Ohio
Buckeye Tools Corp., Dayton, Ohio
Chicago Pneumatic Tool Co., New York, N. Y.
Cleco Div., Reed Roll Bit Co., Houston, Tex.
Cleveland Pneumatic Tool Co., The, Cleveland, Ohio
Divine Brothers Co., Utica, N. Y.
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
Keller Toy Co., Grand Haven, Mich.
Master Pneumatic Tool Co., Inc., Orwell, Ohio
Paasche Airbrush Co., Chicago, Ill.

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Cincinnati Electrical Tool Co., The, Cincinnati, Ohio
Clark, James, Jr., Electric Co., Louisville, Ky.
Clizbe Bros. Mfg. Co., Plymouth, Ind.
Cutter Machine Co., St. Louis, Mo.
Delta Mfg. Division of Rockwell Mfg. Co., Milwaukee, Wis.
Duro Metal Products Co., Chicago, Ill.
Hammond Machinery Builders, Inc., Kalamazoo, Mich.
Hisey Wolf Mach. Co., The, Cincinnati, Ohio
Independent Pneumatic Tool Co., Chicago, Ill.
Mall Tool Co., Chicago, Ill.
Milwaukee Electric Tool Corp., Milwaukee, Wis.
Robbins & Myers, Inc., Hoist & Crane Division, Springfield, Ohio
Standard Electrical Tool Co., The, Cincinnati, Ohio
Stow Manufacturing Co., Inc., Binghamton, N. Y.
United States Electrical Tool Co., The, Cincinnati, Ohio
Valley Electric Corp., St. Louis, Mo.
Van Dorn Electric Tool Co., Towson, Md.
Walker-Turner Co., Inc., Plainfield, N. J.

MACHINES, Cleaning, for Metal Parts

Cincinnati Electrical Tool Co., The, Cincinnati, Ohio
Gray-Mills Corp., Evanston, Ill.
Ingersoll-Rand Co., New York, N. Y.
Mall Tool Co., Chicago, Ill.
Optimus Equip. Co., Matawan, N. J.
Phillips Mfg. Co., Chicago, Ill.
Stow Mfg. Co., Inc., Binghamton, N. Y.

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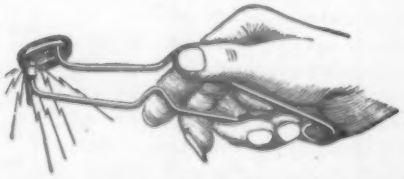

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Bernard Welding Equip., Chicago, Ill.
Burdett Oxygen Co., Cleveland, Ohio
Gaso Equipment Co., Chicago, Ill.
General Welding & Equip. Co., Boston, Mass.
H. & M. Pipe Beveling Machine Co., Tulsa, Okla.
Harris Calorific Co., The, Cleveland, Ohio
Indiana Oxygen Co., Indianapolis, Ind.
Industrial Oxygen Co., Louisville, Ky.
I. S. C. Flame Cutter Corp., New York, N. Y.
Linde Air Products Co., The, New York, N.Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welding Equip. Co., San Francisco, Calif.
Ohmstede Machine Works, Beaumont, Texas
Oxweld Railroad Service Co., Chicago, Ill.

MACHINES, Drilling, Bench

Atlas Press Co., Kalamazoo, Mich.
Boice-Crane Co., Toledo, Ohio
Buffalo Forge Co., Buffalo, N. Y.
Canedy-Otto Mfg. Co., Chicago Heights, Ill.
Black & Decker Mfg. Co., The, Towson, Md.
Champion Blower and Forge Co., Lancaster, Pa.
Cincinnati Electrical Tool Co., The, Cincinnati, Ohio
Delta Mfg. Division of Rockwell Mfg. Co., Milwaukee, Wis.
Dumore Co., The, Racine, Wis.
Duro Metal Products Co., Chicago, Ill.
Hamilton Tool Co., The, Hamilton, Ohio
Independent Pneumatic Tool Co., Chicago, Ill.
Milwaukee Elec. Tool Corp., Milwaukee, Wis.
Skilsaw, Inc., Chicago, Ill.
Standard Electrical Tool Co., The, Cincinnati, Ohio
Stanley Electrical Tools, Division The Stanley Works, New Britain, Conn.
Studebaker Machine Co., Chicago, Ill.
United States Electrical Tool Co., The, Cincinnati, Ohio
Van Dorn Electric Tool Co., The, Towson, Md.
Walker-Turner Co., Inc., Plainfield, N. J.

MACHINES, Drilling—Breast, Chain and Hand

Bradford Machine Tool Co., The, Cincinnati, Ohio
Duro Metal Products Co., Chicago, Ill.
Goodell-Pratt Co., Division of Millers Falls Co., Greenfield, Mass.
Millers Falls Co., Greenfield, Mass.
Skilsaw Inc., Chicago, Ill.
Standard Electrical Tool Co., The, Cincinnati, Ohio
Stanley Tools, Division of The Stanley Works, New Britain, Conn.

MACHINES, Flanging

McCabe Mfg. Co., Lawrence, Mass.
Ryerson, Joseph T. & Son, Inc., Chicago, Ill.
Tube Turns, Inc., Louisville, Ky.
Watson-Stillman Co., Roselle, N. J.

MACHINES, Flexible Shaft

Albertson & Co., Sioux City, Iowa
Aristo Power Tools, Inc., Chicago, Ill.
Bradford Machine Tool Co., The, Cincinnati, Ohio
Dumore Co., The, Racine, Wis.
Duro Metal Products Co., Chicago, Ill.
Elliott Manufacturing Co., Binghamton, N. Y.
Foredom Electric Co., New York, N. Y.
Haskins, R. G., Co., Chicago, Ill.
Ideal Industries, Inc., Sycamore, Ill.
Jarvis, Chas. L., Co., Middletown, Conn.
Jefferson Engineering & Mfg. Co., Detroit, Mich.
Mall Tool Co., Chicago, Ill.
Master Vibrator Co., Dayton, Ohio
Pratt & Whitney, Div. Niles-Bremer-Pond Co., West Hartford, Conn.
Stanley Electric Tools, Division The Stanley Works, New Britain, Conn.
Stow Manufacturing Co., Inc., Binghamton, N. Y.
Strand, N. A., & Co., Chicago, Ill.
Swartz & White Mfg. Co., Binghamton Flexible Shaft Division, Binghamton, N. Y.
United States Electrical Tool Co., The, Cincinnati, Ohio
Walker-Turner Co., Inc., Plainfield, N. J.
Wyzenbeek & Staff, Inc., Chicago, Ill.

MACHINES, Hack Saw

Armstrong-Blum Mfg. Co., Chicago, Ill.
Champion Blower & Forge Co., Lancaster, Pa.
Johnson Mfg. Co., New York, N. Y.
Mid-States Equip. Corp., Chicago, Ill.
Peerless Machine Co., Racine, Wis.
Racine Tool & Machine Co., Racine, Wis.
Sales Service Machine Tool Co., St. Paul, Minn.
Syntron Co., Homer City, Pa.
Wells Manufacturing Corp., Three Rivers, Mich.
Wyzenbeek & Staff, Inc., Chicago, Ill.

MACHINES, Nibbling

Campbell, Andrew C., Division of American Chain & Cable Co., Inc., Bridgeport, Conn.

MACHINES, Sandblast

American Wheelabrator & Equipment Corp., Mishawaka, Ind.
Aristo Power Tools, Inc., Chicago, Ill.
Chicago Eye Shield Co., Chicago, Ill.
Goodyear Tire & Rubber Co., Inc., The, Akron, Ohio.
MacLeod Co., The, Cincinnati, Ohio
Metallizing Co. of America, Inc., Chicago, Ill.
Mine Safety Appliances Co., Pittsburgh, Pa.
Norton Co., Worcester, Mass.
Parsons Engineering Corp., Cleveland, Ohio
Raybestos-Manhattan, Inc., Passaic, N. J.
Ruemelin Mfg. Co., Milwaukee, Wis.
Stoody Co., Whittier, Calif.
Turco Products, Inc., Los Angeles, Calif.
Willson Products, Inc., Reading, Pa.

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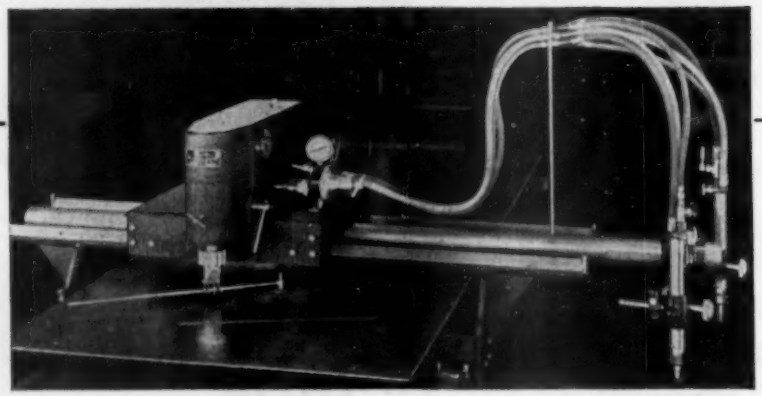

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Buffalo Forge Co., Buffalo, N. Y.
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Clark, Robert H., Co., Los Angeles, Calif.
Cleveland Crane & Engineering Co., The, Wickliffe, Ohio
Famco Machine Co., Racine, Wis.
Independent Pneumatic Tool Co., Chicago, Ill.
Knu-Vise Incorporated, Detroit, Mich.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Parker Manufacturing Co., Santa Monica, Calif.
Peck, Stow & Wilcox Co., Southington, Conn.
Simonds Saw & Steel Co., Fitchburg, Mass.
Stanley Electric Tool Division, The Stanley Works, New Britain, Conn.
Studebaker Machine Co., Chicago, Ill.
Webb Corp., The, Webb City, Mo.
Whitney, W. A., Mfg. Co., Rockford, Ill.

MACHINES, Welding, Gas

Air Reduction Sales Co., New York, N. Y.
American Gas & Chemical Corp., Harrison, N. J.
Burdett Oxygen Co., Cleveland, Ohio
Linde Air Products Co., The, New York, N.Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Metro Mfg. Co., Long Island City, N. Y.
Oxweld Railroad Service Co., Chicago, Ill.

MAGNESIUM — Sheets, Plates, Bars, Etc.

American Magnesium Corp., Pittsburgh, Pa.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Dow Chemical Co., The, Midland, Mich.
Revere Copper and Brass Inc., N. Y., N. Y.
White Metal Rolling & Stamping Corp., Brooklyn, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

MAGNIFIERS, Inspection

Boyer-Campbell Co., Detroit, Mich.
Cargille, R. P., New York, N. Y.
General Scientific Equip Co., Philadelphia, Pa.
Pike, E. W., Elizabeth, N. J.
RCA Engineering Products Dept., Camden, N. J.
Safety Clothing & Equip. Co., Cleveland, Ohio
Scherr, George, Co., Inc., New York, N. Y.

MALLETS, Rubber and Composition Head

Chicago Rawhide Mfg. Co., Chicago, Ill.
Goodrich, B. F., Co., The, Akron, Ohio
Goodyear Tire & Rubber Co., Inc., The, Akron, Ohio
Greene, Tweed & Co., New York, N. Y.
Home Rubber Co., Trenton, N. J.
Plomb Tool Co., Los Angeles, Calif.
Quaker Rubber Corp., Philadelphia, Pa.
Republic Rubber Division, Lee Rubber and Tire Corp., Youngstown, Ohio
Stanley Tools, Div. of the Stanley Works, New Britain, Conn.
United States Rubber Co., New York, N. Y.
Williams, J. H., & Co., Buffalo, N. Y.

MALLETS, Wood

Bernz, Otto, Co., Inc., Rochester, N. Y.
Cortland Sales & Products, Inc., Cortland, Ohio
Lignum-Vitae Products Corp., Jersey City, N. J.
Stanley Tools, Division of The Stanley Works, New Britain, Conn.
Warren-Handle Works Co., Cortland, Ohio

MANIFOLDS, Oxygen and Acetylene

AA Welding Supply Co., Chicago, Ill. (oxygen only)
Air Products Inc., Allentown, Pa.
Air Reduction Sales Co., New York, N. Y.
American Gas & Chemical Corp., Harrison, N. J.
American Oxygen Service Corp., Harrison, N. J.
Arc Welding Supply Co., Bronx, N. Y.
Bastian-Blessing Co., Chicago, Ill.
Black Mfg. Co., The, Baltimore, Md.
Burdett Oxygen Co., Cleveland, Ohio
Commercial Gas Corp., Wilkes-Barre, Pa.
Craftsweld Equip. Corp., Long Island City, N. Y.
Dockson Corp., Detroit, Mich.
Goss Gas, Inc., Pittsburgh, Pa.
Harris Calorific Co., The, Cleveland, Ohio
Independent Engineering Co., O'Fallon, Ill.
K-G Welding & Cutting Co., New York, N.Y.
Linde Air Products Co., The, New York, N.Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
Nageldinger & Son, Inc., J., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Welding Equipment Co., San Francisco, Calif.
Oxweld Railroad Service Co., Chicago, Ill.
Smith Welding Equipment Corp., Minneapolis, Minn.
Southern Oxygen Co., Inc., Washington, D.C.
Steele Gases, Inc., Chicago, Ill.
Stoody Co., Whittier, Calif.
Stuart Oxygen Co., San Francisco, Calif.
Superior Valve & Fttings Co., Pittsburgh, Pa.
Thompson Engineering Co., The, Grand Rapids, Mich.
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Weldit, Inc., Detroit, Mich.

MASKS, Oxygen

American Gas & Chemical Corp., Harrison, N. J.
American Oxygen Service Corp., Harrison, N. J.
Arco Equipment Corp., The, Bryan, Ohio
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Mine Safety Appliances Co., Pittsburgh, Pa.
Nageldinger, J. & Son, Inc., New York, N. Y.
Puritan Compressed Gas Corp., Kansas City, Mo.
Varkell, Paul, Co., New York, N. Y.

MASKS, Paint Spray

American Optical Co., Southbridge, Mass.
Bullard, E. D., Co., San Francisco, Calif.
Chicago Eye Shield Co., Chicago, Ill.
DeVilbiss Co., The, Toledo, Ohio
Dockson Corp., Detroit, Mich.
General Detroit Corp., The, Detroit, Mich.
General Scientific Equip.Co.,Philadelphia,Pa.
Imperial Brass Mfg. Co., Chicago, Ill.
Industrial Products Co., Philadelphia, Pa.
McDonald, B. F., Co., Los Angeles, Calif.
Mine Safety Appliances Co., Pittsburgh, Pa.
Paasche Airbrush Co., Chicago, Ill.
Safety Equipment Service Co., The, Cleveland, Ohio
Sellstrom Manufacturing Co., Chicago, Ill.
Standard Safety Equipment Co., Chicago, Ill.
Willson Products, Inc., Reading, Pa.

MASKS, Sand Blast

American Optical Co., Southbridge, Mass.
Bullard, E. D., Co., San Francisco, Calif.
Chicago Eye Shield Co., Chicago, Ill.
Dockson Corp., Detroit, Mich.
General Detroit Corp., The, Detroit, Mich.

(Continued on Page 90)

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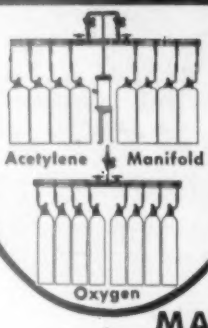

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MASKS, Sand Blast

(Continued from Page 89)

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Matthews, Jas. H. & Co., Pittsburgh, Pa.
Mine Safety Appliances Co., Pittsburgh, Pa.
Mystik Adhesive Products, Chicago, Ill.
Paasche Airbrush Co., Chicago, Ill.
Safety Equipment Service Co., The, Cleveland, Ohio
Sellstrom Manufacturing Co., Chicago, Ill.
Standard Safety Equipment Co., Chicago, Ill.
Willson Products, Inc., Reading, Pa.

MEASURING TAPES

(See: "Tapes, Measuring")

METAL, Babbitt

Ajax Metal Co., The, Philadelphia, Pa.
Allis-Chalmers Manufacturing Co., Milwaukee, Wis.
Alpha Metals, Inc., Brooklyn, N. Y.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Bond, Charles, Co., Philadelphia, Pa.
Bunting Brass & Bronze Co., The, Toledo, Ohio
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Dodge Manufacturing Corp., Mishawaka, Ind.
Eagle-Picher Co., The, Cincinnati, Ohio
Gardiner Metal Co., Chicago, Ill.
Johnson Bronze Co., New Castle, Pa.
McKay Co., The, York, Pa.
Magnolia Metal Co., Elizabeth, N. J.
National Lead Co., New York, N. Y.
Ryerson, Joseph T. & Son, Inc., Chicago, Ill.
Shook Bronze Corp., Lima, Ohio
Teuscher Pulley & Belting Co., St. Louis, Mo.

METAL-SPRAYING EQUIPMENT

Alloy Sprayer Co., Ann Arbor, Mich.
American Oxygen Service Corp., Harrison, N. J.
Metallizing Co., of America, Inc., Chicago, Ill.
Metallizing Engineering Co., Inc., Long Island City, N. Y.
Metalspray Co., Inc., Los Angeles, Calif.
Paasche Airbrush Co., Chicago, Ill.
Powder Weld Process Co., The, Brooklyn, N. Y.
Vande Mfg. Co., Chicago, Ill.
Wall Colmonoy Corp., Detroit, Mich.

MONEL (Standard Mills Forms)

Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
International Nickel Co., Inc., New York, N. Y.
Steel Sales Corp., Chicago, Ill.
Superior Tube Co., Norristown, Pa.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

NICKEL (Standard Mill Forms)

Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Hoskins Mfg. Co., Detroit, Mich.
International Nickel Co., Inc., New York, N. Y.
Steel Sales Corp., Chicago, Ill.
Superior Tube Co., Norristown, Pa.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

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H & M Pipe Beveling Machine Co., Tulsa, Okla.
Heath Engineering Co., Ft. Collins, Colo.
Vogel Tool and Die Corp., Chicago, Ill.

NOZZLES, Torch

(See: "Tips, Cutting, Flame," "Tips, Welding Gas")

NOZZLES, Sand Blast

American Wheelabrator & Equipment Corp., Mishawaka, Ind.
MacLeod Co., The, Cincinnati, Ohio
Norton Co., Worcester, Mass.
Paasche Airbrush Co., Chicago, Ill.
Stoody Co., Whittier, Calif.

NOZZLES, Paint Spray

Allen, W. D., Mfg. Co., Chicago, Ill.
Boston Woven Hose & Rubber Co., Cambridge, Mass.
Buffalo Forge Co., Buffalo, N. Y.
Chain Belt Co., Milwaukee, Wis.
DeVilbiss Co., The, Toledo, Ohio
Elkhart Brass Mfg. Co., Elkhart, Ind.
Link-Belt Co., Atlanta Plant, Altanta; Pershing Road Plant, Chicago; Dallas Plant, Dallas; Minneapolis; Philadelphia; Pacific Division, Los Angeles; San Francisco; Seattle
Paasche Airbrush Co., Chicago, Ill.
Schrader's A., Son, Division of Scovill Manufacturing Co. Inc., Brooklyn, N. Y.
Sherman, H. B., Mfg. Co., Battle Creek, Mich.
Worthington Pump and Machinery Corp., Harrison, N. J.
Yarnall-Waring Co., Chestnut Hill, Philadelphia, Pa.

OVENS, Electrode Drying

Aufhauser Bros. Co., New York, N. Y.
Despatch Oven Co., Minneapolis, Minn.
Moslo Mach. Co., Cleveland, Ohio
Paasche Airbrush Co., Chicago, Ill.
Ross, J. O., Engineering Co., New York, N. Y.

OVERALLS, Asbestos

Eastern Equipment Co., Inc., Willow Grove, Pa.
Greene, Tweed & Co., North Wales, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Johns-Manville, New York, N. Y.
Standard Safety Equip. Co., Chicago, Ill.

OVERALLS, Fire Resistance Duck

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Standard Safety Equip. Co., Chicago, Ill.

OVERALLS, Leather

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Fibre-Metal Products Co., The, Chester, Pa.
General Electric Co., Schenectady, N. Y.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Tillman & Co., John, Long Beach, Calif.

OXIDE — Removing Compounds

(See: "Cleaners, Metal")

OXYGEN, Compressed

Acetylene Co. of Utah, Salt Lake City, Utah
Acetylene Gas Co., St. Louis, Mo.
Air Products Inc., Allentown, Pa.
Air Reduction Sales Co., New York, N. Y.
American Compressed Gas Products Inc., Ft. Wayne, Ind.
American Gas & Chemical Co., Harrison, N. J.
American Oxygen Service Corp., Harrison, N. J.
Atlas Acetylene Co., Kearny, N. J.
Balbach Co., The, Omaha, Nebr.
Bird Gas Corp., Detroit, Mich.
Burdett Oxygen Co., Cleveland, Ohio
Buckeye Oxygen Co., Canton, Ohio
Commercial Gas Corp., Wilkes-Barre, Pa.
Denver Oxygen Co., Inc., The, Denver, Colo.
Harnischfeger Corp., Milwaukee, Wis.
Hollup Corp., Chicago, Ill.
Houston Oxygen Co., Houston, Texas
Imperial Brass Mfg. Co., Chicago, Ill.
Independent Engineering Co., Inc., O'Fallon, Ill.
Indiana Oxygen Co., Indianapolis, Ind.
Industrial Prod. Co., Philadelphia, Pa.
Jackson Products, Warren, Mich.
K-G Welding and Cutting Co., Inc., New York, N. Y.
Lee, K. O., Co., Aberdeen, S. D.
Kansas Oxygen Div., Hutchinson, Kansas
Kimball Safety Prod. Co., Cleveland, Ohio
Larkin Lectro Products, New York, N. Y.
Lincoln Electric Co., Cleveland, Ohio
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Maine Industrial Gas Co., Lewiston, Me.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
McDonald Co., B. F., Los Angeles, Calif.
Metal Bond Mfg. Co., St. Louis, Mo.
Metal & Thermit Corp., New York, N. Y.
Metro Mfg. Co., Long Island City, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Modern Engineering Co. Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
New England Gas Products, Inc., Charlestown, Mass.
Oklahoma Oxygen Co., Tulsa, Okla.
Oxweld Railroad Service Co., The, Chicago, Ill.
Pacific Oxygen Co., Oakland, Calif.
Parker Safety Equipment Co., Irvington, N. J.
Pulmosan Safety Equipment Corp., Brooklyn, N. Y.
Safety Clothing & Equip. Co., Cleveland, Ohio
Sellstrom Mfg. Co., Chicago, Ill.
Smith Corp., A. O., Milwaukee, Wis.
Southern Oxygen Co., Inc., Bladensburg, Md.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Standard Safety Equipment Co., Chicago, Ill.
Steele Gases Inc., Chicago, Ill.
Steel Sales Corp., Chicago, Ill.
Superior Industrial Gas Corp., Astoria, N. Y.
Superior Oxy-Acetylene Mach. Co. Hamilton, Ohio
Trindl Products Ltd., Chicago, Ill.
U. S. Steel Supply Co., Chicago, Ill.
Welding Gas Products Co., Chattanooga, Tenn.
Welding Materials, Inc., Lemoyne, Pa.
Whitmore Oxygen Co., Salt Lake City, Utah
Wolverine Gas Products, Inc., Saginaw, Mich.

OXYGEN GAUGES

(See: "Gauges, Oxygen and Acetylene")

OXYGEN MASKS

(See: "Masks, Oxygen")

PANTS, Asbestos

American Optical Co., Southbridge, Mass.
Eastern Equipment Co., Inc., Willow Grove, Pa.
General Scientific Equip. Co., Philadelphia, Pa.
Greene, Tweed & Co., North Wales, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Janos Asbestos Co., New York, N. Y.
Johns Manville, New York, N. Y.
Keasbey & Mattison, Ambler, Pa.
Mine Safety Appliances Co., Pittsburgh, Pa.
Standard Safety Equip. Co., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

PANTS, Fire Resistance Duck

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
American Optical Co., Southbridge, Mass.
Eastern Equipment Co., Inc., Willow Grove, Pa.
General Scientific Equip. Co., Philadelphia, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Mine Safety Appliances Co., Pittsburgh, Pa.
Standard Safety Equip. Co., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

PANTS, Leather

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
American Optical Co., Southbridge, Mass.
Arc Welding Supply Co., Bronx, N. Y.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Fibre-Metal Products Co., The, Chester, Pa.
General Electric Co., Schenectady, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Mine Safety Appliances Co., Pittsburgh, Pa.
National Welders Supply Co., Charlotte, N. C.
Tillman & Co., John, Long Beach, Calif.
Williams & Co., Inc., Pittsburgh, Pa.

PELLETS, Temperature Recording

(See: "Temperature Indicating Pellets")

PIPE and TUBING NOTCHING UNIT

(See: "Notching Units, Pipe and Tubing")

PIPE BENDING MACHINES
(See: "Machines, Bending, Pipe")

PIPE FITTINGS
(See: "Fittings, Pipe")

PIPE WELDING CLAMPS
(See: "Clamps, Aligning")

PIPING, Blow, Exhaust and Ventilating

Connecticut Blower Co., Hartford, Conn.
Johns-Manville, New York, N. Y.
Midwest Piping & Supply Co., Inc., St. Louis, Mo.
Naylor Pipe Co., Chicago, Ill.
Paasche Airbrush Co., Chicago, Ill.
Sprout, Waldron & Co., Inc., Muncy, Pa.
Taylor Forge & Pipe Works, Chicago, Ill.

PLATES, Steel
(See: "Steel, Sheets, Plates, Bars, and Structural Shapes, etc.")

PLIERS

Billings & Spencer Co., The, Hartford, Conn.
Bonney Forge & Tool Works, Allentown, Pa.
Bridgeport Hdwe. Mfg. Co., The, Bridgeport, Conn.
Champion DeArment Tool Co., Meadville, Pa.
Crescent Tool Co., Jamestown, N. Y.
Duro Metal Products Co., Chicago, Ill.
Grobet File Co. of America, New York, N. Y.
Klein, Mathias, & Sons, Chicago, Ill.
Kraeuter & Co., Inc., Newark, N. J.
New Britain Machine Co., New Britain, Conn.
Owatonna Tool Co., Owatonna, Minn.
Park Metalware Co., Inc., Orchard Park, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Plomb Tool Co., Los Angeles, Calif.
Red Devil Tools, Inc., Irvington, N. J.
Smith, Seymour & Son, Inc., Oakville, Conn.
Stevens Walden, Inc., Worcester, Mass.
Utica Drop Forge & Tool Corp., Utica, N. Y.
VLchek Tool Co., The, Cleveland, Ohio
Williams, J. H. & Co., Buffalo, N. Y.

PLIERS, Toggle-Action

Knu-Vise, Inc., Detroit, Mich.
Lapeer Mfg. Co., Lapeer, Mich.
Owatonna Tool Co., Owatonna, Minn.
Peterson Mfg. Co., Inc., De Witt, Neb.
Seymour Smith & Son, Inc., Oakville, Conn.

PLOW SHARE RECLAIMING UNITS

Victor Equipment Co., San Francisco, Calif.
Wiese Plow Welding Co., Perry, Iowa

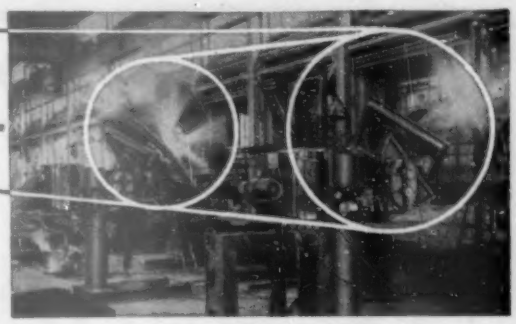
PLUGS and RECEPTACLES

Albert & J. M. Anderson Mfg. Co., S. Boston, Mass.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Appleton Electric Co., Chicago, Ill.
Clinch Mfg. Corp., Chicago, Ill.
Cutler-Hammer Inc., Milwaukee, Wis.
General Electric Co., Schenectady, N. Y.
Industrial Products Co., Philadephia, Pa.
Jones, Howard B., Div. Cinch Mfg. Corp., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Shober Sales Inc., Stockton, Calif.
Russell & Stoll Co., New York, N. Y.
Stevens, C. H., & Co., S. Norwalk, Conn.
United States Rubber Co., New York, N. Y.
Westinghouse Electric Corp., Pittsburgh, Pa.

POLISHERS

Acme Mfg. Co., Detroit, Mich.
Aronson Machine Co., Arcade, N. Y.
Black & Decker Mfg. Co., The, Towson, Md.
Buckeye Tool Corp., Dayton, Ohio
Buehler Ltd., Chicago, Ill.
Chicago Pneumatic Tool Co., New York, N. Y.
Cleveland Pneumatic Tool Co., Cleveland, Ohio
Cutter Machine Co., (Belt Driven) St. Louis, Mo.
Divine Brothers Co., Utica, N. Y.
Elliott Mfg. Co., Binghamton, N. Y.
Hammond Machinery Builders, Inc., Kalamazoo, Mich.
Hisey Wolf Mach. Co., The, Cincinnati, Ohio
Independent Pneumatic Tool Co., Aurora, Ill.
Mall Tool Co., Chicago, Ill.
Milwaukee Elec. Tool Corp., Milwaukee, Wis.
NuSteel Co., Chicago, Ill.
Overly, Chas. F., Co., Cleveland, Ohio
Porter-Cable Machine Co., Syracuse, N. Y.
Rotor Tool Co., Cleveland, Ohio
Skilsaw, Inc., Chicago, Ill.
Standard Electric Tool Co., The, Cincinnati, Ohio
Stanley Elec. Tool, Div. New Britain, Conn.
Stow Mfg. Co., Binghamton, N. Y.
Van Dorn Electric Tool Co., The, Towson, Md.

More WELDING going on here.....



More welding and less time spent in flopping, propping up and crawling around weldments is the end result of the C-F Positioners in this welding department.

Mounted on C-F Welding Positioners, weldments can be quickly brought into position for a downhand pass—better, more uniform welds with resulting economies and production increases follow. Welders spend more time welding when they work with C-F Positioners because one "set-up" on the table allows them to maneuver the job without assistance, whether hand or power operated Positioners are used. Power operated, variable speed C-F Positioners, with table rotation speeds in any range from 0 RPM and up, coupled with table tilt to 135° from the horizontal make them the logical choice for any production welding operation. Like all C-F Positioners, they have drilled tables for easy set-ups or tables can be quickly removed for installation of special fixtures or jigs. Write for Bulletin WP 22. CULLEN-FRIESTEDT CO., 1309 S. Kilbourn Ave., Chicago 23, Ill.

CULLEN-FRIESTEDT CO., CHICAGO 23, ILL.

C-F positioned welds mean better, more economical welds.

PORTABLE WELDING SHOPS

American Gas & Chemical Corp., Harrison, N. J.
Couse Mfg. Co., Inc., Newark, N. J.
Hebard & Co., W. F., Chicago, Ill.
Hobart Bros. Co., Troy, Ohio
National Cylinder Gas Co., Chicago, Ill.
Progressive Welder Co., Detroit, Mich.
Willys-Overland Motors, Inc., Toledo, Ohio

POSITIONERS, Welding

Acme Mfg. Co., Detroit, Mich.
American Oxygen Service Corp., Harrison, N. J.
Aronson Machine Co., Arcade, N. Y.
Bentley Weldery, Inc., Syracuse, N. Y.
Bryant Products Distributing Co., Jackson, Mich.
Cullen-Friestedt Co., Chicago, Ill.
Cumming Tools, Inc., Kansas City, Mo.
Desmond-Stephan Mfg. Co., The, Urbana, Ohio
Drennan, Inc., Lee J., Arcade, N. Y.
Garfield Engineering Corp., Kansas City, Mo.
General Welding Co., The, Cleveland, Ohio

(Continued on Page 92)

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POSITIONERS, Welding

(Continued from Page 91)

Gouran, Mark F., Philadelphia, Pa.
Harnischfeger Corp., Milwaukee, Wis.
Lukens Steel Co., & Divisions, Coatesville, Pa.
Lyon-Raymond Corp., Greene, N. Y.
McFerron-Myers Prod. Co., Cleveland, Ohio
Metro-Vise Co., Detroit, Mich.
National Supply Co., Torrance, Calif.
Peck, Cecil C., Co., Cleveland, Ohio
Ragle, J. M., Industries, Kansas City, Mo.
Ransome Machinery Co., Dunellen, N. J.
Reed Engineering Co., Carthage, Mo.
Schrader, F. W., Co., Culver City, Calif.
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Victory Engineering & Machine Works, Inc., St. Louis, Mo.
Welding Machines Mfg. Co., Detroit, Mich.
Westinghouse Elec. Corp., Pittsburgh, Pa.
Whiting Corp., Harvey, Ill.
Williams, J. H., & Co., Buffalo, N. Y.
Wilton Tool Mfg. Co., Chicago, Ill.

POTASSIUM SILICATE

E. I. duPont deNemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.
Philadelphia Quartz Co., Philadelphia, Pa.

POTS—Annealing, Case Hardening, Etc.

American Car and Foundry Co., New York, N. Y.
Eclipse Fuel Engineering Co., Rockford, Ill.
General Electric Co., Schenectady, N. Y.
Gordon, Claud S., Co., Chicago, Ill.
Holden, A. F., Co., The, New Haven, Conn.
Hoskins Mfg. Co., Detroit, Mich.
Johnson Gas Appliance Co., Cedar Rapids, Iowa
Lukens Steel Co., & Divisions, Coatesville, Pa.
Mahr Mfg. Co., Div. Diamond Iron Works, Minneapolis, Minn.
R. S. Products Corp., Philadelphia, Pa.
Strong, Carlisle & Hammond Co., Cleveland, Ohio
Sunbeam Stewart Industrial Furance, Division Sunbeam Corp., Chicago, Ill.

POTS, Fire, Solder Iron—Gasoline, Kerosene, Gas

Bernz, Otto, Co., Inc., Rochester, N. Y.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Diener, Geo. W., Mfg. Co., Chicago, Ill.
Eclipse Fuel Engineering Co., Rockford, Ill.
Insto-Gas Corp., Detroit, Mich. Also (bottled gas).
Turner Brass Works, The, Sycamore, Ill.
Zukens Steel Co., Coatesville, Pa.

POTS and KETTLES, Metal Melting

Aeroil Products Co., West New York, N. J.
Bernz, Otto, Co., Inc., Rochester, N. Y.
Bethlehem Steel Co., Bethlehem, Pa.
Eclipse Fuel Engineering Co., Rockford, Ill.
Falcon Equipment Co., New Brighton, Pa.
General Electric Co., Schenectady, N. Y.
Hollands Mfg. Co., Erie, Pa.
Hoskins Mfg. Co., Detroit, Mich.
Johnson Gas Appliance Co., Cedar Rapids, Iowa
Lukens Steel Co., & Divisions, Coatesville, Pa.
Mahr Mfg. Co., Div. Diamond Iron Works, Minneapolis, Minn.
R. S. Products Corp., Philadelphia, Pa.
Russell Electric Co., Chicago, Ill. (Electric).
Salem Tool Co., The, Salem, Ohio
Sta-Warm Electric Co., Ravenna, Ohio
Sunbeam Stewart Industrial Furance Division, Sunbeam Corp., Chicago, Ill.
Turner Brass Works, The, Sycamore, Ill.
Zukens Steel Co., Coatesville, Pa.

POWER HACK SAW

(See: "Machines, Hack Saw")

POWDER CUTTING TORCHES

(See: "Torches, Powder Cutting")

POWDER CUTTING TORCHES

Air Reduction Sales Co., New York, N. Y.
Linde Air Products Co., The, New York, N. Y.

POWDER, Flame-Cutting

(See: "Fluxes, Flame-Cutting")

POWDER-WELDING ALLOYS

(See: "Alloys, Powder Welding")

PREHEATING, Annealing, Stress-Relieving Coils

(See: "Coils, Preheating, etc.")

PREHEATING COILS

("See: "Coils, Preheating, Annealing and Stress-Relieving")

PREHEATING TORCHES

(See: "Torches, Preheating")

PRESS BRAKES

(See: "Brakes, Bending")

PRESSURE WELDERS OXY-ACETYLENE

(See: "Welders, Pressure, Oxy-Acetylene")

PROJECTION WELDERS

(See: "Welders, Projection")

PULLERS

Blackhawk Mfg. Co., Milwaukee, Wis.
Imperial Brass Mfg. Co., The, Chicago, Ill.
Owatonna Tool Co., Owatonna, Minn.
Plomb Tool Co., Los Angeles, Calif.
Templeton, Kenly & Co., Chicago, Ill.
Utica Drop Forge & Tool Corp., Utica, N. Y.
Williams, J. H., & Co., Buffalo, N. Y.

PUNCH and SHEARS COMBINED

Buffalo Forge Co., Buffalo, N. Y.
National Machine Tool Co., Racine, Wis.
Niagara Machine & Tool Works, Buffalo, N. Y.
Parker Mfg. Co., Santa Monica, Calif.
Peck, Stow & Wilcox Co., Southington, Conn.
Watson-Stillman Co., Roselle, N. J.
Webb Corp., The, Webb City, Mo.

PUNCHES, Hand

American Swiss File & Tool Co., Elizabeth, N. J.
Bonney Forge & Tool Works, Allentown, Pa.
Buffalo Forge Co., Buffalo, N. Y.
C-B Tool Co., Lancaster, Pa.
Cincinnati Tool Co., The, Cincinnati, Ohio
Crescent Tool Co., Jamestown, N. Y.
Knu-Vise Inc., Detroit, Mich.
Mayhew Steel Prods., Inc., Shelburne Falls, Mass.
National Machine Tool Co., Racine, Wis.
National Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Owatonna Tool Co., Owatonna, Minn.
Oxford Tool Corp., Philadelphia, Pa.
Parker-Kalon Corp., New York, N. Y.
Peck, Stow & Wilcox Co., Southington, Pa.
Plomb Tool Co., Los Angeles, Calif.
Quality Tools Corp., New Wilmington, Pa.
Stanely Tools Div., of the Stanely Works, New Britain, Conn.
Whitney, W. A., Mfg. Co., Rockford, Ill.
Williams, J. H., & Co., Buffalo, N. Y.

RADIUM INSPECTION

(See also: "Inspection Equipment, Radium")

Canadian Radium & Uranium Corp., New York, N. Y.
Radium Chemical Co., Inc., New York, N. Y.
Triplett & Barton, Inc., Burbank, Calif.
St. John X-Ray Laboratories, Califon, N. J.

RAIL WELDERS

(See: "Welders, Rail")

RAILING MATERIALS

Blum, Julius, & Co., Inc., New York, N. Y.
Braun, J. G., Co., Chicago, Ill.
Stewart Iron Works Co., Inc., Cincinnati, Ohio

RECEIVERS, Air

Chicago Pneumatic Tool Co., New York, N. Y.
Curtis Pneumatic Machinery, Div. of Curtis Mfg. Co., St. Louis, Mo.
Ingersoll-Rand Co., New York, N. Y.
Linde Air Products Co., The, New York, N. Y.
Schramm, Inc., West Chester, Pa.
Worthington Pump and Machinery Corp., Harrison, N. J.

RECORDING INSTRUMENTS

(See: "Weld-Time Recorders")

RECOVERY EQUIPMENT, Flux

(See: "Flux Recovery Equipment")

REELS, Cable Automatic Take-Up

Appleton Electric Co., Chicago, Ill.
Lewis-Shepard Products, Inc., Watertown, Mass.
Manning, Maxwell & Moore, Inc., Shaw-Box Crane & Hoist Division, Muskegon, Mich.
Market Forge Co., Everett, Mass.

REFRACTORIES

(See also: "Cement, Fire Brick" "Cement High Temperature," "Cement, Refractory," Etc.; "Brick, Fire," Etc.; "Fire Clay," "Guns, Refractory Application," Etc.)

Armstrong Cork Co., Lancaster, Pa.
Bay State Abrasive Products Co., Westboro, Mass.
Botfield Refractories Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Carey, Philip, Mfg. Co., The, Cincinnati, Ohio
Dixon, Joseph, Crucible Co., Jersey City, N. J.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
General Refractories Co., Philadelphia, Pa.
Green, A. P., Fire Brick Co., Mexico, Mo.
Harbison-Walker Refractories Co., Pittsburgh, Pa.
Johns-Manville, New York, N. Y.
Keasbey & Mattison Co., Ambler, Pa.
Laclede-Christy Co., St. Louis, Mo.
Massillion Refractories Co., The, Massillion, Ohio
Mexico Refractories Co., Mexico, Mo.
Niles Fire Brick Co., The, Niles, Ohio
North American Refractories Co., Cleveland, Ohio
Norton Co., Worcester, Mass.
Pilbrico Jointless Firebrick Co., Chicago, Ill.
Quigley Co., Inc., New York, N. Y.
Strong, Carlisle & Hammond Co., Cleveland, Ohio
Titanium Alloy Mfg. Co., Niagara Falls, N. Y.

REFRIGERATION UNITS (RESISTANCE WELDER)

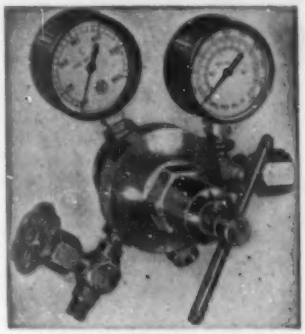
Acro Welder Mfg. Co., Inc., Milwaukee, Wis.
Airtemp Div., Chrysler Corp., Dayton, Ohio
Detroit Electronic Products Co., Detroit, Mich.
Expert Welding Machine Co., Detroit, Mich.
Frostode Products Detroit, Mich.
Progressive Welder Co., Detroit, Mich.
Swift Elec. Welder Co., Detroit, Mich.
Taylor-Winfield Corp., Warren, Ohio
Temprite Products Corp., Detroit, Mich.
Thomson Electric Welder Co., Lynn Mass.
Universal Welder Corp., Cleveland, Ohio

REGALVANIZING COATINGS

(See: "Galvanizing Compounds")

REGULATORS, Oxygen and Acetylene

Air Reduction Sales Co., New York, N. Y.
American Gas & Chemical Corp., Harrison, N. J.
American Oxygen Service Corp., Harrison, N. J.
Arc Welding Supply Co., Bronx, N. Y.
Aro Equipment Corp., The, Bryan, Ohio
Bastian-Blessing Co., Chicago, Ill.
Black Mfg. Co., The, Baltimore, Md.
Burdett Oxygen Co., Cleveland, Ohio
Chek-Shock Mfg., Fowler, Calif.
Craftsweld Equipment Corp., Long Island City, N. Y.
Dockson Corp., Detroit, Mich.
Electric Auto-Lite Co., Inc., New York, N. Y.
Eutectic Welding Alloys Corp., New York, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
General Welding & Equip. Co., Boston, Mass.
Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.
Goss Gas, Inc., Pittsburgh, Pa.
Harris Calorific Co., The, Cleveland, Ohio
Hoke Inc., Englewood, N. J.
Imperial Brass Mfg. Co., Chicago, Ill.
K-G Welding & Cutting Co., New York, N. Y.
Leslie Co., Lyndhurst, N. J.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Metallizing Co., of America, Inc., Chicago, Ill.
Metro Mfg. Co., Long Island City, N. Y.
Miles, John R. R., Inc., Minneapolis, Minn.
Modern Engineering Co., St. Louis, Mo.
Nageldinger, J., & Son, Inc., N. Y., N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
National Welding Equipment Co., San Francisco, Calif.
Oxweld Railroad Service Co., The, Chicago, Ill.
Paasche Airbrush Co., Chicago, Ill.
Smith Welding Equipment Corp., Minneapolis, Minn.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Thompson Engineering Co., The, Grand Rapids, Mich.
Trex Engineering Supply Co., Newark, N. J.



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ALL OTHER COMPRESSED CYLINDER GASES

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Large sensitive diaphragm, extra large nozzle and quick closing seat action combine to provide accurate regulation.

Designed for use with inlet pressures not to exceed 200 psi and delivery pressures up to 100 psi.

Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Welders Supply & Mfg. Co., Cincinnati, Ohio
Weldit Inc., Detroit, Mich.
Williams & Co., Inc., Pittsburgh, Pa.

REGULATORS, Pressure, Air

American Schaeffer & Budenberg Instrument Division, Manning, Maxwell & Moore, Inc., Bridgeport, Conn.
Aro Equipment Corp., The, Bryan, Ohio
Atlas Valve Co., Newark, N. J.
Automatic Temperature Control Co., Philadelphia, Pa.
Bastian-Blessing Co., Chicago, Ill.
Binks Manufacturing Co., Chicago, Ill.
Black Manufacturing Co., Baltimore, Md.
Bristol Co., The, Waterbury, Conn.
Brown, W. R. Corp., Chicago, Ill.
Burdett Oxygen Co., Cleveland, Ohio
Cash, A. W., Valve Mfg. Corp., Decatur, Ill.
Craftsweld Equip. Corp., Long Island City, N. Y.
Cutler-Hammer, Inc., Milwaukee, Wis.
Davis Regulator Co., Chicago, Ill.
D'Este Division of American Chain & Cable Co., Inc., Reading, Pa.
DeVilbiss Co., The, Toledo, Ohio
Dockson Corp., Detroit, Mich.
Farris Engineering Co., Palisades Park, N. J.
Goss Gas, Inc., Pittsburgh, Pa.
Harris Calorific Co., The, Cleveland, Ohio
Hoke Inc., Englewood, N. J.
Imperial Brass Manufacturing Co., Chicago, Ill.
Kellog Div., American Brake Shoe Co., Rochester, N. Y.
Kieley & Muller, Inc., North Bergen, N. J.
Leslie Co., Lyndhurst, N. J.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Mason-Neilan Regulator Co., Boston, Mass.
Metro Mfg. Co., Long Island City, N. Y.
Minneapolis Honeywell Regulator Co., Minneapolis, Minn.
Modern Engineering Co., St. Louis, Mo.
Mueller Co., Decatur, Ill.
Nageldinger & Son, Inc., J., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
Norgen, C. A., Co., Inc., Denver, Colo.
Paasche Airbrush Co., Chicago, Ill.
Purity Cylinder Gases, Inc., Grand Rapids, Mich.
Reading-Pratt & Cady Division of American Chain & Cable Co., Inc., Reading, Pa.
Schrader's, A., Son, Division of Scovill Mfg. Co., Inc., Brooklyn, N. Y.
Smith Welding Equipment Corp., Minneapolis, Minn.
Stewart-Warner Corp., Alemite Div., Chicago, Ill.
Strong, Carlisle & Hammond Co., Cleveland, Ohio
Studebaker Machine Co., Maywood, Ill.
Swartout Co., The, Cleveland, Ohio
Square D Co., Milwaukee, Wis.
Taylor Instrument Companies, Rochester, N. Y.
Vande Mfg. Co., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.

RESISTANCE WELDERS

(See: "Welders, Band Saw," "Welders, Butt," "Welders, Flash," "Welders Gun," "Welders, Projection," "Welders, Rail," "Welders Seam," "Welders, Spot")

RESISTOR UNITS, Portable

General Electric Co., Schenectady, N. Y.
Mullenbach Electrical Mfg. Co., Los Angeles, Calif.
Ohmite Mfg. Co., Chicago, Ill.
Stevens, C. H. and Co., South Norwalk, Conn.

RESPIRATORS

American Gas & Chemical Corp., Harrison, N. J.
American Industrial Safety Equipment Co., Brooklyn, N. Y.
American Optical Co., Southbridge, Mass.
Boyer-Campbell Co., Detroit, Mich.
Burdett Oxygen Co., The, Cleveland, Ohio
Chicago Eye Shield Co., Chicago, Ill.
Davis Emergency Equip. Co., Inc., Newark, N. J.
Dockson Corp., Detroit, Mich.
General Scientific Equip. Co., Philadelphia, Pa.
Industrial Prod. Co., Philadelphia, Pa.
McDonald Co., B. F., Los Angeles, Calif.
Mine Safety Appliances Co., Pittsburgh, Pa.
Oxweld Railroad Service Co., The, Chicago, Ill.
Paasche Airbrush Co., Chicago, Ill.
Parker Safety Equipment Co., Irvington, N. J.
Pulmosan Safety Equipment Corp., Brooklyn, N. Y.
Safety Clothing & Equip. Co., Cleveland, Ohio
Sellstrom Mfg. Co., Chicago, Ill.
Standard Safety Equipment Co., Chicago, Ill.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Willson Products, Inc., Reading, Pa.

RHEOSTATS

Air Reduction Sales Co., New York, N. Y.
Clark Controller Co., The, Cleveland, Ohio
Cutler-Hammer, Inc., Milwaukee, Wis.
General Electric Co., Schenectady, N. Y.
Guyan Machine Co., Logan, W. Virginia
Ohmite Mfg. Co., Chicago, Ill.
Lincoln Electric Co., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Westinghouse Electric Corp., Pittsburgh, Pa.
Wilson Welder & Metals Inc., New York, N. Y.

RINGS, Brazing Alloys

(See: "Brazing Alloy Rings")

RINGS, Weld Back-Up

Commerce Pattern Foundry & Machine Co., Detroit, Mich.
Midwest Piping & Supply Co., Inc., St. Louis, Mo.
Riverside Machinery Co., Chicago, Ill.
Robvon Backing Ring and Fabricating Co., Portland, Ore.
Tube Turns, Louisville, Ky.
Wedge Protectors, Inc., Cleveland, Ohio

RODS WELDING

(See: "Welding Rods, Aluminum, Bronze, Cast Iron, etc.")

RODS, Wire, Aluminum

Aluminum Co. of America, Pittsburgh, Pa.
Reynolds Metals Co., Louisville, Ky.

RODS, Wire, Steel

Allegheny Ludlum Steel Corp., Pittsburgh, Pa. (stainless)
American Steel & Wire Co., Cleveland, Ohio
Arc Welding Supply Co., Bronx, N. Y.
Aufhauser Bros., Corp., New York, N. Y.
Bethlehem Steel Co., Bethlehem, Pa.
Buffalo Bolt Co., North Tonawanda, N. Y.
Carpenter Steel Co., The, Reading, Pa.
Columbia Steel Co., United States Steel Corp., Subsidiary, San Francisco, Calif.
Crucible Steel Co. of America, New York, N. Y.
Firth Sterling Steel & Carbide Corp., McKeesport, Pa.
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Page Steel and Wire Division of American Chain & Cable Co., Inc., Monessen, Pa.
Republic Steel Corp., Cleveland, Ohio
Roebling's, John A., Sons, Co., Trenton, N. J.
Tennessee Coal, Iron and Railroad Co., Birmingham, Ala.
Truscon Steel Co., Youngstown, Ohio
Welding Equip. & Supply Co., Detroit, Mich.
Wheeling Steel Corp., Wheeling, W. Va.
Wickwire Spencer Steel Division, The Colorado Fuel & Iron Corp., Buffalo, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Youngstown Sheet and Tube Co., Youngstown, Ohio

ROLLING SHUNTS

(See: "Cables, Resistance Welding")

ROLLS BENDING

Buffalo Forge Co., Buffalo, N. Y.
Niagara Machine & Tool Works, Buffalo, N. Y.
Reed Engineering Co., Carthage, Mo.
Webb Corp., The, Webb City, Mo.

ROPE, Wire

American Cable Division of American Chain & Cable Co., Inc., Wilkes-Barre, Pa.
American Steel & Wire Co., Cleveland, Ohio
Bethlehem Steel Co., Bethlehem, Pa.
Broderick & Bascom Rope Co., St. Louis, Mo.
Columbia Steel Co., United States Steel Corp., Subsidiary, San Francisco, Calif.
Hazard Wire Rope Division of American Chain & Cable Co., Inc., Wilkes-Barre, Pa.
Crucible Steel Co. of America, New York, N. Y.
Johnson Steel & Wire Co., Inc., Worcester, Mass.
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Lamson & Sessions Co., The, Birmingham, Ala.
Paulsen-Webber Cordage Corp., New York, N. Y.
Roebling's, John A., Sons Co., Trenton, N. J.
Ryerson, Joseph T. & Son, Inc., Chicago, Ill.
Sasgen Derrick Co., Chicago, Ill.
Sunbury Wire Rope Mfg. Co., Sunbury, Pa.
Tennessee Coal, Iron & Railroad Co., U. S. Steel Corp., Sub., Birmingham, Ala.
Upson-Walton Co., The, Cleveland, Ohio
Wickwire Spencer Steel Division, The Colorado Fuel & Iron Corp., Buffalo, N. Y.

RUBBER ABRASIVES

(See: "Abrasives, Rubber")

RULES, Folding

Keuffel & Esser Co., Hoboken, N. J.
Lufkin Rule Co., The, Saginaw, Mich.
Master Rule Mfg. Co., Inc., New York, N. Y.
Stanley Tools Division of The Stanley Works, New Britain, Conn.

RULES, Steel

Brown & Sharpe Mfg. Co., Providence, R. I.
Disston, Henry, & Sons, Tacony, Philadelphia, Pa.
Goodell-Pratt Co., Division of Millers Falls Co., Greenfield, Mass.
Greene, Tweed & Co., North Wales, Pa.
Interstate Sales Co., New York, N. Y.
Lufkin Rule Co., The, Saginaw, Mich.
Millers Falls Co., Greenfield, Mass.
Simonds Saw & Steel Co., Fitchburg, Mass.
Stanley Tools Division of The Stanley Works, New Britain, Conn.
Starrett, L. S., Co., The, Athol, Mass.

RUST PREVENTIVES and REMOVERS

Allen, L. B., Co., Inc., Chicago, Ill.
Allied Products Co., Chicago, Ill.
Cabot, Samuel, Inc., Boston, Mass.
Cook's, Adam, Sons, Inc., Linden, N. J.
Diversey Corp., Chicago, Ill.
Dolph, John C., Co., Newark, N. J.
E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
Eagle-Picher Sales Co., The, Cincinnati, Ohio
Hollingshead, R. M., Corp., Camden, N. J.
Houghton, E. F., & Co., Philadelphia, Pa.
Kano Laboratories, Chicago, Ill.
Keystone Lubricating Co., Philadelphia, Pa.
Klem Chemicals, Inc., Dearborn, Mich.
Merix Chemical Co., Chicago, Ill.
Nox-Rust Chemical Corp., Chicago, Ill.
Oakite Products, Inc., New York, N. Y.
Quaker Chemical Products Corp., Conshohocken, Pa.
Quigley Co., Inc., New York, N. Y.
Rust-Oleum Corp., Evanston, Ill.
Rusticide Products Co., Cleveland, Ohio
Smith & Sons, Inc., G. W., Dayton, Ohio
Sonneborn Sons Inc., L., New York, N. Y.
Stuart, D. A., Oil Co., Ltd., Chicago, Ill.
Sun Oil Co., Philadelphia, Pa.
Superior Flake Graphite Co., Chicago, Ill.
Turco Products, Inc., Los Angeles, Calif.
Walles Dove-Hermiston Corp., Westfield, N. J.
Waverly Petroleum Products Co., Philadelphia, Pa.
Wayne Chemical Products Co., Detroit, Mich.
Wilbur & Williams Co., The, Boston, Mass.
Wolfe-Kote Co., Inc., Saeboygan, Wis.

SAFETY CLOTHING

(Refer to specific item desired such as: "Aprons," "Caps," "Coats," "Coveralls," "Gloves and Mittens," "Shoes," etc.)

SALT TABLETS and DISPENSERS

Bullard, E. D., Co., San Francisco, Calif.
Davis Emergency Equip. Co., Inc., Newark, N. J.
Detroit First Aid Co., Detroit, Mich.
Dockson Corp., Detroit, Mich.
General Scientific Equip. Co., Philadelphia, Pa.
Industrial Prod. Co., Philadelphia, Pa.
International Salt Co., Inc., Scranton, Pa.
McDonald Co., B. F., Los Angeles, Calif.
Mine Safety Appliances Co., Pittsburgh, Pa.
Morton Salt Co., Chicago, Ill.
Pulmosan Safety Equipment Corp., Brooklyn, N. Y.
Safety Clothing & Equip. Co., Cleveland, Ohio
Standard Safety Equip. Co., Chicago, Ill.

SALTS, Heat Treating, Metal

Holden, A. E., Co., The, New Haven, Conn.
American Cyanamid Co., New York, N. Y.

SANDBLAST ABRASIVES

Bay State Abrasive Products Co., Westboro, Mass.
Corborundum Co., The, Niagara Falls, N. Y.
Houghton, E. F., & Co., Philadelphia, Pa.
Macklin Co., Jackson, Mich.
Metallizing Co. of America, Inc., Chicago, Ill.
Metallizing Engineering Co., Long Island City, N. Y.
Norton Co., Worcester, Mass.
Parsons Engineering Corp., Cleveland, Ohio
Simonds Abrasive Co., Philadelphia, Pa.
Turco Products, Inc., Los Angeles, Calif.

SANDBLAST EQUIPMENT

(See: "Machines, Sandblast")

SANDERS, Electric, Portable

Albertson & Co., Inc., Sioux City, Iowa
Aristo Power Tools, Inc., Chicago, Ill.
Aro Equipment Corp., The, Bryan, Ohio
Black & Decker Mfg. Co., The, Towson, Md.
Boice-Crane Co., Toledo, Ohio
Bradford Machine Tool Co., Cincinnati, Ohio
Chicago Pneumatic Tool Co., New York, N. Y.
Cincinnati Electrical Tool Co., The, Cincinnati, Ohio
Clark, James, Jr., Electric Co., Louisville, Ky.
Delta Mfg., Division of The Rockwell Mfg. Co., Milwaukee, Wis.
Duro Metal Products Co., Chicago, Ill.
Gaston Power Tools, Chicago, Ill.
Haskins, R. C., Co., Chicago, Ill.
Independent Pneumatic Tool Co., Aurora, Ill.
Mall Tool Co., Chicago, Ill.
Millers Falls Co., Greenfield, Mass.
Milwaukee Electric Tool Corp., Milwaukee, Wis.
Porter-Cable Machine Co., Syracuse, N. Y.
Rotor Tool Co., The, Cleveland, Ohio
Red Devil Tools, Inc., Irvington, N. J.
Skilsaw, Inc., Chicago, Ill.
Stanley Electric Tool Division, The Stanley Works, New Britain, Conn.
Sterling Tool Products Co., Chicago, Ill.
Stow Mfg. Co., Inc., Binghamton, N. Y.
Strand, N. A., & Co., Chicago, Ill.
Syntron Co, Homer City, Pa.
United States Electrical Tool Co., The, Cincinnati, Ohio
Van Dorn Electric Tool Co., The, Towson, Md.
Walker-Turner Co., Inc., Plainfield, N. J.
Wodack Electric Tool Corp., Chicago, Ill.

SANDERS, Pneumatic, Portable

Aro Equipment Corp., The, Bryan, Ohio
Chicago Pneumatic Tool Co., New York, N. Y.
Cleco Div., Reed Roller Bit Co., Houston, Texas
Independent Pneumatic Tool Co., Aurora, Ill.
Ingersoll-Rand Co., New York, N. Y.
Keller Toy Co., Grand Haven, Mich.
Master Pneumatic Tool Co., Inc., Orwell, Ohio
Milwaukee Elec. Tool Corp., Milwaukee, Wis.
Paasche Airbrush Co., Chicago, Ill.
Rotor Tool Co., The, Cleveland, Ohio
Sterling Tool Products Co., Chicago, Ill.

SANDPAPER

Abrasive Products, Inc., South Braintree, Mass.
Armour & Co., Coated Abrasives Div., Chicago, Ill.
Behr-Manning Corp., Troy, N. Y.
Carborundum Co., The, Niagara Falls, N. Y.
Clover Mfg. Co., Norwalk, Conn.
Michigan Abrasive Co., Detroit, Mich.
Mid-West Abrasive Co., Owosso, Mich.
Minnesota Mining & Mfg. Co., St. Paul, Minn.
Porter-Cable Machine Co., Syracuse, N. Y.

SAWS, Band (Blades), for Metal

Atkins, E. C. & Co., Indianapolis, Ind.
Disston, Henry & Sons, Inc., Philadelphia, Pa.
Millers Falls Co., Greenfield, Mass.
Simonds Saw & Steel Co., Fitchburg, Mass.
Spartan Saw Works, Inc., Springfield, Mass.
Starrett Co., The, L. S., Athol, Mass.

SAWS, Band (Machine), for Metal

Armstrong-Blum Mfg. Co., Chicago, Ill.
Boice-Crane Co., Toledo, Ohio
Delta Mfg. Division of Rockwell Mfg. Co., Milwaukee, Wis.
DoAll Co., The, Des Plaines, Ill.
Duro Metal Products Co., Chicago, Ill.
Heston & Anderson, Fairfield, Iowa
Johnson Manufacturing Corp., New York, N. Y.
Kalamazoo Tank & Silo Co., Machine Tool Division, Kalamazoo, Mich.
Peerless Machine Co., Racine, Wis.
Racine Tool & Machine Co., Racine, Wis.
Walker-Turner Co., Inc., Plainfield, N. J.
Wells Manufacturing Corp., Three Rivers, Mich.

SAWS, Circular, Metal Cutting

Atkins, E. C., and Co., Indianapolis, Ind.
Bethlehem Steel Co., Bethlehem, Pa.
Black & Decker Co., The, Towson, Md.
Brown & Sharpe Mfg. Co., Providence, R. I.
Disston, Henry, & Sons, Inc., Tacony, Philadelphia, Pa.
DoAll Co., The, Des Plaines, Ill.
Fibre-Metal Products Co., The, Chester, Pa.
Gorham Tool Co., Detroit, Mich.
Grobet File Co. of America, New York, N. Y.
Kett Tool Co., Cincinnati, Ohio
Mall Tool Co., Chicago, Ill.
Mid-States Equip. Corp., Chicago, Ill.
Midwest Tool & Mfg. Co., Detroit, Mich.
Morse Twist Drill & Machine Co., New Bedford, Mass.
National Twist Drill & Tool Co., Rochester, Mich.
Ohlen-Bishop Mfg. Co., Columbus, Ohio
Reltool Corp., Milwaukee, Wis.
Ryerson, Joseph T. & Son, Inc., Chicago, Ill.
Simonds Saw and Steel Co., Fitchburg, Mass.
Skilsaw, Inc., Chicago, Ill.
Standard Tool Co., The, Cleveland, Ohio
Starrett Co., The, L. S., Athol, Mass.

SAWS, Electric, Portable

Aristo Power Tools, Inc., Chicago, Ill.
Black & Decker Mfg. Co., The, Towson, Md.
Independent Pneumatic Tool Co., Chicago, Ill.
Mall Tool Co., Chicago, Ill.
Skilsaw, Inc., Chicago, Ill.
Stanley Electric Tools, Div. of the Stanley Works, New Britain, Conn.
Van Dorn Electric Tool Co., Cleveland, Ohio

SAWS, Hack (Hand Blades)

American Saw & Mfg. Co., Springfield, Mass.
Armstrong-Blum Mfg. Co., Chicago, Ill.
Atkins, E. C., and Co., Indianapolis, Ind.
Barnes, W. O., Co., Inc., Detroit, Mich.
Bonney Forge & Tool Works, Allentown, Pa.
Capewell Manufacturing Co., The, Hartford, Conn.
Clemson Bros., Middletown, N. Y.
Crescent Tool Co., Jamestown, N. Y.
Diamond Saw Works, Inc., Buffalo, N. Y.
Disston, Henry, & Sons, Inc., Tacony, Philadelphia, Pa.
Forsberg Mfg. Co., The, Bridgeport, Conn.
Goodell-Pratt Co., Division of Millers Falls Co., Greenfield, Mass.
Griffin, G. W., Co., Franklin, N. H.
Millers Falls Co., Greenfield, Mass.
New Britain Machine Co., The, New Britain, Conn.
Owatonna Tool Co., Owatonna, Minn.
Plomb Tool Co., Los Angeles, Calif.
Ryerson, Joseph T. & Son, Inc., Chicago, Ill.
Simonds Saw and Steel Co., Fitchburg, Mass.
Spartan Saw Works, Inc., Springfield, Mass.
Starrett, L. S., Co., The, Athol, Mass.
Thompson, Henry G., & Son, Co., The, New Haven, Conn.
Victor Saw Works, Inc., Middletown, N. Y.
Wyzenbeek & Staff, Inc., Chicago, Ill.

SAWS, Hack (Machines)

(See: "Machines, Hack Saw")

SAWS, Hack (Power Blades)

American Saw & Mfg. Co., Springfield, Mass.
Armstrong-Blum Mfg. Co., Chicago, Ill.
Atkins, E. C., and Co., Indianapolis, Ind.
Barnes, W. O., Co., Inc., Detroit, Mich.
Capewell Mfg. Co., Hartford, Conn.
Clemson Bros., Middletown, N. Y.
Diamond Saw Works, Inc., Buffalo, N. Y.
Disston, Henry, & Sons, Inc., Tacony, Philadelphia, Pa.
Forsberg Mfg. Co., The, Bridgeport, Conn.
Goodell-Pratt Co., Division of Millers Falls Co., Greenfield, Mass.
Griffin, G. W., Co., Franklin, N. H.
Mid-States Equip. Corp., Chicago, Ill.
Millers Falls Co., Greenfield, Mass.
Ryerson, Joseph T. & Son, Inc., Chicago, Ill.
Simonds Saw and Steel Co., Fitchburg, Mass.
Spartan Saw Works, Inc., Springfield, Mass.
Starrett, L. S., Co., The, Athol, Mass.
Thompson, Henry G., & Son, Co., The, New Haven, Conn.
Victor Saw Works, Inc., Middletown, N. Y.

SAWS, Hole

Anderson Corp., Worcester, Mass.
Armstrong-Blum Mfg. Co., Chicago, Ill.
Black & Decker Mfg. Co., The, Towson, Md.
Disston, Henry, & Sons, Inc., Tacony, Philadelphia, Pa.
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
Misener Manufacturing Co., Inc., Syracuse, N. Y.
Porter-Cable Machine Co., Syracuse, N. Y.
Stanley Electric Tools, Div. of the Stanley Works, New Britain, Conn.
U. S. Electrical Tool Co., Cincinnati, Ohio
Van Dorn Electric Tool Co., Towson, Md.

SCALING HAMMERS

(See: "Hammers, Clipping and Scaling Hand")

SEAM WELDERS, Resistance

(See: "Welders, Seam")

SHAFTS, Flexible

Albertson & Co., Inc., Sioux City, Iowa
Duro Metal Products Co., Chicago, Ill.
Elliott Manufacturing Co., Binghamton, N. Y.
Foredom Electric Co., New York, N. Y.
Haskins, R. G., Co., Chicago, Ill.
Jarvis, Chas. L., Co., Middletown, Conn.
Jefferson Engineering & Mfg. Co., Detroit, Mich.
Jeffrey Mfg. Co., The, Columbus, Ohio
Mall Tool Co., Chicago, Ill.
Master Electric Co., The, Dayton, Ohio
Pratt & Whitney, Div. Niles-Bement-Pond Co., West Hartford, Conn.
Stow Manufacturing Co., Binghamton, N. Y.
Strand, N. A., & Co., Chicago, Ill.
Swartz & White Mfg. Co., Binghamton Flexible Shaft Division, Binghamton, N. Y.
United States Electrical Tool Co., The, Cincinnati, Ohio
Walker-Turner Co., Inc., Plainfield, N. J.
Wyzenbeek & Staff, Inc., Chicago, Ill.

SHEARS

Black & Decker Mfg. Co., The, Towson, Md.
Buckeye Tool Corp., Dayton, Ohio
Cleveland Crane & Engineering Co., Wickliffe, Ohio
Kling Brothers Engr. Works, Chicago, Ill.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Parker Mfg. Co., Santa Monica, Calif.
Van Dorn Electric Tool Co., The, Towson, Md.

SHEARS, Metal Cutting, Electric, Portable

Barth Mfg. Co., The, Milldale, Conn.
Black & Decker Mfg. Co., The, Towson, Md.
Buffalo Forge Co., Buffalo, N. Y.
C-B Tool Co., Lancaster, Pa.
Independent Pneumatic Tool Co., Chicago, Ill.
Jefferson Engineering & Mfg. Co., Detroit, Mich.
O'Neil-Irwin Mfg. Co., Minneapolis, Minn.
Ryerson, Joseph T. & Son, Inc., Chicago, Ill.
Skilsaw, Inc., Chicago, Ill.
Stanley Electric Tool Division, The Stanley Works, New Britain, Conn.
Van Dorn Electric Tool Co., The, Towson, Md.
Webb Corp., The, Webb City, Mo.
Whiting Corp., Harvey, Ill.

SHEARS, Metal Cutting, Rotary

(See: "Machines-Shears, Metal Cutting")

SHEARS, Metal Cutting, Foot Power, Belts or Motor Drives

(See: "Machines-Shears, Metal Cutting")

SHIELDS, Welding Inspection

(See: "Face Shields, Welding Inspection")

SHOES, Safety

Dunn Products, Chicago, Ill.
Greene, Tweed & Co., North Wales, Pa.
International Shoe Co., St. Louis, Mo.
Lehigh Safety Shoe Co., Inc., Allentown, Pa.
Mine Safety Appliances Co., Pittsburgh, Pa.
Pulmosan Safety Equipment Corp., Brooklyn, N. Y.
Safety Clothing & Equip. Co., Cleveland, Ohio
Thom McAn-Safety Shoe Div., New York, N. Y.
Thompson Engineering Co., The, Grand Rapids, Mich.
United States Rubber Co., New York, N. Y.

SHUNTS

(See: "Cables, Resistance Welding")

SILVER-BRAZING ALLOYS

Air Reduction Sales Co., New York, N. Y.
All State Welding Alloys Co., Inc., White Plains, N. Y.
Allen, L. B. Co., Inc., Chicago, Ill
Alpha Metals, Inc., Brooklyn, N. Y.
Amer. Brass Co., The, Waterbury, Conn.
Amer. Oxygen Serv. Corp., Harrison, N. J.
American Platinum Works, The, Newark, N. J.
American Products Corp., Chicago, Ill.
Arc Welding Supply Co., Bronx, N. Y.
Atkins, E. C., & Co., Indianapolis, Ind.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Central Steel and Wire Co., Chicago, Ill.
Champion Rivet Co., Cleveland, Ohio
Chase Brass & Copper Co., Waterbury, Conn.
Childs Aluminum Solder Co., New York, N. Y.
Cleveland Precision Ring & Products Co., Cleveland, Ohio
Consolidated Metals Corp., Detroit, Mich.
Disston, Henry & Sons, Inc., Tacony, Phila., Pa.
Dockson Corp., Detroit, Mich.
Ever-Tite Alloys Co., New York, N. Y.
Eutectic Welding Alloys Co., New York, N. Y.
Goldsmith Bros. Smelting & Refining Co., Chicago, Ill.
Handy & Harman, New York, N. Y.
Johnson, Lloyd S., & Co., Chicago, Ill.
Krieg, Charles W. Co., Newark, N. J.
Lehigh Safety Shoe Co., Allentown, Pa.
Linde Air Products Co., The, New York, N. Y.
McCauley Alloy Sales Co., Chicago, Ill.
Metal Bond Mfg. Co., St. Louis, Mo.
Ryerson, Joseph T. & Son, Inc., Chicago, Ill.
Mallory, P. R. & Co., Inc., Indianapolis, Ind.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
National Welders Supply Co., Charlotte, N. C.
Phillips, C. E., & Co., Detroit, Mich.
Sherman & Co., New York, N. Y.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Steel Sales Corp., Chicago, Ill.
United Wire & Supply Corp., Providence, R. I.
Universal Welder Corp., Cleveland, Ohio
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Westinghouse Elec. Corp., Pittsburgh, Pa.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

SKIN CREAM, Cleansing

Dennis Chemical Co., St. Louis, Mo.
Detroit First Aid Co., Detroit, Mich.
Industrial Products Co., Philadelphia, Pa.
Millburn Co., Detroit, Mich.
Mine Safety Appliances Co., Pittsburgh, Pa.
Safety Clothing and Equipment Co., Cleveland, Ohio

SKIN CREAM, Protective

Bullard, E. D., Co., San Francisco, Calif.
Cadet Creme Sales Co., Springfield, Mass.
Davis Emergency Equipment Co., Inc., Newark, N. J.
Detroit First Aid Co., Detroit, Mich.
Dunn Products, Chicago, Ill.
E. I. duPont deNemours & Co., Wilmington, Del.
General Electric Co., Schenectady, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Industrial Products Co., Philadelphia, Pa.
Magnaflux Corp., Chicago, Ill.
McDonald Co., B. F., Los Angeles, Calif.
Milburn Co., Detroit, Mich.
Mine Safety Appliances Co., Pittsburgh, Pa.
Safety Clothing & Equip. Co., Cleveland, Ohio
Standard Safety Equipment Co., Chicago, Ill.
Turco Products, Inc., Los Angeles, Calif.

SLEDGES, Mauls or Striking Hammers

(See: "Hammers, Blacksmiths")

SLEEVES, Asbestos

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
American Optical Co., Southbridge, Mass.
Eastern Equipment Co., Inc., Willow Grove, Pa.
General Electric Co., Schenectady, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Greene, Tweed & Co., North Wales, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Janos Asbestos Co., New York, N. Y.
Johns-Manville, New York, N. Y.
Mine Safety Appliances Co., Pittsburgh, Pa.
Standard Safety Equip. Co., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

SLEEVES, Fire Resistance Duck

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
American Optical Co., Southbridge, Mass.
Eastern Equipment Co., Inc., Willow Grove, Pa.
General Scientific Equip. Co., Philadelphia, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Mine Safety Appliances Co., Pittsburgh, Pa.
Standard Safety Equip. Co., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

SLEEVES, Leather

Aljay Manufacturing Co., Inc., Philadelphia, Pa.
American Optical Co., Southbridge, Mass.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Fibre-Metal Products Co., The, Chester, Pa.
General Electric Co., Schenectady, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Holcomb Safety Garment Co., Chicago, Ill.
Industrial Gloves Co., Danville, Ill.
Industrial Products Co., Philadelphia, Pa.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Mine Safety Appliances Co., Pittsburgh, Pa.
National Welders Supply Co., Charlotte, N. C.
Streichert, E. J., Chicago, Ill.
Tillman & Co., John, Long Beach, Calif.
Williams & Co., Inc., Pittsburgh, Pa.

SLINGS, Chain

American Chain Division of American Chain & Cable Co., Inc., York, Pa.
Columbus McKinnon Chain Corp., Tonawanda, N. Y.
Hercules Sling Co., Rockford, Ill.
International Chain & Mfg. Co., York, Pa.
McKay Co., The, York, Pa.
Newhall Chain Forge & Iron Co., Westwood, N. J.
Paulson-Webber Cordage Corp., New York, N. Y.
Round, David and Son, Cleveland, Ohio
Ryerson, Joseph T., & Son, Inc., Chicago, Ill.
Taylor, S. G., Chain Co., Hammond, Ind.
Youngstown Welding & Engineering Co., The, Youngstown, Ohio

SLINGS, Wire Rope

American Cable Division of American Chain & Cable Co., Inc., Wilkes-Barre, Pa.
American Steel & Wire Co., Cleveland, Ohio
Bethlehem Steel Co., Bethlehem, Pa.
Broderick & Bascom Rope Co., St. Louis, Mo.
Caldwell Co., The, Rockford, Ill.
Hazard Wire Rope Division of American Chain & Cable Co., Inc., Wilkes-Barre, Pa.
Macwhyte Co., Kenosha, Wis.
Paulsen-Webber Cordage Corp., New York, N. Y.
Robeling's, John A., Sons, Co., Trenton, N. J.
Ryerson, Joseph T., & Son, Inc., Chicago, Ill.
Tennessee Coal, Iron & Railroad Co., U. S. Steel Corp., Cub., Birmingham, Ala.
Upson-Walton Co., The, Cleveland, Ohio
Wickwire Spencer Steel, Division of Colorado Fuel & Iron Co., Buffalo, N. Y.

SOAPSTONE HOLDERS

(See: "Holders, Soapstone")

SODIUM SILICATE

American Chemical & Flux Co., Brooklyn, N. Y.
Diamond Alkali Co., Pittsburgh, Pa.
E. I. duPont deNemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.
Philadelphia Quartz Co., Philadelphia, Pa.

SOLDER, Aluminum

Air Reduction Sales Co., New York, N. Y.
Aladdin Rod & Flux Mfg. Co., Grand Rapids, Mich.
Allen Co., L. B., Chicago, Ill.
Allied Weld-Craft, Inc., Indianapolis, Ind.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
Aluminum Co. of America, Pittsburgh, Pa.
American Oxygen Service Corp., Harrison, N. J.
American Solder & Flux Co., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Central Steel and Wire Co., Chicago, Ill.
Chicago Hardware Foundry Co., North Chicago, Ill.
Childs Aluminum Solder Co., New York, N. Y.
Eutectic Welding Alloys Co., New York, N. Y.
Ever-Tite Alloys Corp., New York, N. Y.
Farelloy Co., Philadelphia, Pa.
Flux-All Chemical Products, New York, N. Y.
Galv-Weld Products, Dayton, Ohio
Kester Solder Co., Chicago, Ill.
Krieg, Charles W., Co., Newark, N. J.
Lloyd S. Johnson & Co., Chicago, Ill.
Johnson Mfg. Co., Inc., Mt. Vernon, Iowa
Linde Air Products Co., The, New York, N. Y.
Marquette Mfg. Co., Minneapolis, Minn.
Metal Bond Mfg. Co., St. Louis, Mo.
Modern Engineering Co., Inc., St. Louis, Mo.
National Welders Supply Co., Charlotte, N. C.
Ohmer, George H., Dayton, Ohio
Pal-Weld Mfg. Co., Seattle, Wash.
Phillips, C. E. & Co., Detroit, Mich.
Pittsburgh Metals Purifying Co., Pittsburgh, Pa.
Ragle, J. M., Industries, Kansas City, Mo.
Ryerson, Joseph T. & Son, Inc., Chicago, Ill.
Smith Welding Equipment Corp., Minneapolis, Minn.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Steel Sales Corp., Chicago, Ill.
United Welding Service Co., Franklin, Pa.
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Welding Alloys Mfg. Co., Newark, N. J.
White Metal Rolling & Stamping Corp., Brooklyn, N. Y.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wooldridge Aluminum Welding Products, Inc., Glastonbury, Conn.
Wow Welding Specialties Co., Chicago, Ill.

SOLDER, Bar and Wire

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen, L. B., Co., Inc., Chicago, Ill.
Alpha Metals, Inc., Brooklyn, N. Y.
Aluminum Co. of America, Pittsburgh, Pa.
American Solder & Flux Co., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Central Steel and Wire Co., Chicago, Ill.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cleveland Precision Ring & Products Co., Cleveland, Ohio
Consolidated Metals Corp., Detroit, Mich.
Dockson Corp., Detroit, Mich.
Eagle-Picher Co., The, Cincinnati, Ohio
Eutectic Welding Alloys Corp., New York, N. Y.
Farreloy Co., Philadelphia, Pa.
W. B. Franklin Co., San Francisco, Calif. (Tape only)
Galv-Weld Products, Dayton, Ohio
Gardiner Metal Co., Chicago, Ill.
Handy & Harman, New York, N. Y.
Kester Solder Co., Chicago, Ill.
Krieg, Charles W., Co., Newark, N. J.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metal Bond Mfg. Co., St. Louis, Mo.
National Bearing Metals Corp., St. Louis, Mo.
National Lead Co., New York, N. Y.
Ohmer, George H., Dayton, Ohio
Phillips, C. E. & Co., Detroit, Mich.
Prier Brass Mfg. Co., Kansas City, Mo.
United Wire & Supply Corp, Providence, R. I.
Wayne Chemical Prod. Co., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

SOLDER, Brazing

(See: "Silver Brazing Alloys")

SOLDER, Hard

(See: "Silver Brazing Alloys")

SOLDER PADDLES
Remont Mfg. Co., Lombard, Ill.

SOLDER, Silver
(See: "Silver Brazing Alloys")

SOLDER, Soft
(See: "Solder, Bar and Wire")

SOLDER, Self-Fluxing
(See: "Solder, Wire, Flux")

SOLDER, Wire, Fluxed
All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen, L. B., Co., Chicago, Ill.
Alpha Metals, Inc., Brooklyn, N. Y.
Arc Welding Supply Co., Bronx, N. Y.
Belmont Smelting & Refining Works, Inc. Brooklyn, N. Y.
Eutectic Welding Alloys Corp., New York, N. Y.
Kester Solder Co., Chicago, Ill.
National Lead Co., New York, N. Y.
Ohmer, George H., Dayton, Ohio
Perry Equipment Corp., Philadelphia, Pa.
Ruby Chemical Co., The, Columbus, Ohio

SOLDERING, Coppers
(See: "Irons, Soldering")

SOLDERING IRONS
(See: "Irons Soldering")

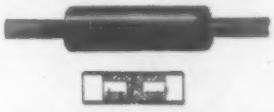
SOLDERING OUTFITS, Acetylene or Hydrogen
Bastian-Blessing Co., Chicago, Ill.
Burdett Oxygen Co., Cleveland, Ohio
Dockson Corp., Detroit, Mich.
General Scientific Equip. Co., Philadelphia, Pa.
Goss Gas, Inc., Pittsburgh, Pa.
Harris Calorific Co., The, Cleveland, Ohio
Hoke Inc., Englewood, N. J.
Imperial Brass Mfg. Co., The, Chicago, Ill.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welding Equip. Co., San Francisco, Calif.
Oxweld Railroad Service Co., Chicago, Ill.
Powder Weld Process Co., The, Brooklyn, N. Y.
Ragle, J. M., Industries, Kansas City, Mo.
Sight Feed Generator Co., The, Richmond, Ind.
Smith Welding Equipment Corp., Minneapolis, Minn.
Torchweld Equipment Co., Chicago, Ill.
Torit Manufacturing Co., St. Paul, Minn.
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., Victor Welding Equipment Division, San Francisco, Calif.
Weldit Inc., Detroit, Mich.

SOLDERING TIPS
(See: "Tips, Soldering")

SPATTER PREVENTATIVES
Acme White Lead & Color Works, Detroit, Mich.
Eutectic Welding Alloys Corp., New York, N. Y.
Fibre-Metal Prod. Co., Chester, Pa.
General Electric Co., Schenectady, N. Y.
Hobart Bros. Co., Troy, Ohio
Klem Chemicals, Inc., Dearborn, Mich.
Lincoln Elec. Co., The, Cleveland, Ohio
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Midland Paint & Varnish Co., Cleveland, Ohio
Mowatt, George R., Co., New York, N. Y.
Oakite Products Inc., New York, N. Y.
Smith, G. W., & Sons, Dayton, Ohio
Steel Sales Corp., Chicago, Ill.
Thompson & Co., Oakmont, Pa.
Victor Equipment Co., San Francisco, Calif.
Welsh Mfg. Co., Providence, R. I.
Wayne Chemical Prod. Co., Detroit, Mich.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wolfe-Kote Co., Inc., Sheboygan, Wis.

SPECTACLES
(See: "Goggles")

SPLICERS, Cable
Arc Welding Supply Co., Bronx, N. Y.
C-B Tool Co., Lancaster, Pa.
General Electric Co., Schenectady, N. Y.
Jackson Products, Warren, Mich.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Mine Safety Appliances Co., Pittsburgh, Pa.
Mueller Electric Co., Cleveland, Ohio
National Welding Equip. Co., San Francisco, Calif.



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JACKSON PRODUCTS
WARREN, MICHIGAN

Stevens & Co., C. H., S. Norwalk, Conn.
Tennessee Coal, Iron & Railroad Co., U. S. Steel Corp. Sub., Birmingham, Ala.
Tweco Products Co., Wichita, Kan.
Westinghouse Electric Corp., Pittsburgh, Pa.

SPOT WELDER CONVERTER
Expert Welding Mach. Co., Detroit, Mich.
Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.
Hoffman, Robert W., Co., Chicago, Ill.
Rex Welder & Equipment Co., Kansas City, Mo.
Universal Welder Corp., Cleveland, Ohio

SPOT WELDERS
(See: "Welders, Spot")

SPOT-WELDING GUNS
(See: "Welders, Gun")

SPRAY GUNS
(See: "Guns, Spray")

STABILIZERS, Arc
Cesco Products, Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Mid-States Equipment Co., Chicago, Ill.
Smith Corp., A. O., Milwaukee, Wis.
Titanium Alloy Mfg. Co., Niagara Falls, N. Y.
Welding Apparatus Co., Chicago, Ill.
Westinghouse Electric Corp., Pittsburgh, Pa.

STEEL (SHEETS, PLATES, BARS, STRUCTURAL SHAPES, Etc.)
American Managanese Steel Div., American Brake Shoe Co., Chicago Heights, Ill.
American Rolling Mill Co., Middletown, Ohio
Apollo Steel Co., Pittsburgh, Pa.
Armco Steel Corp., Middletown, Ohio
Baldwin Locomotive Works, The, Philadelphia, Pa.
Bethlehem Steel Co., Bethlehem, Pa.
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Castle, A. M. & Co., Chicago, Ill.
Central Steel and Wire Co., Chicago, Ill.
Crucible Steel Co. of America, New York, N. Y.
Disston, Henry & Sons, Inc., Philadelphia, Pa.
Great Lakes Steel Corp., Detroit, Mich.
Granite City Steel Co., Granite City, Ill.
Heller Brothers Co., Newark, N. J.
Ingersoll Steel Division, Borg Warner Corp. Chicago, Ill.
Inland Steel Co., Chicago, Ill.
Jessop Steel Co., Washington, Pa.
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Lukens Steel Co., & Divisions, Coatesville, Pa.
Manganese Steel Forge Co., Philadelphia, Pa.
National Steel Corp., Ecorse, Detroit, Mich.
Reliance Steel Div., Detroit Steel Corp., Cleveland, Ohio
Republic Steel Corp., Cleveland, Ohio
Roebling's Sons Co., John A., Trenton, N. J.
Rustless Iron & Steel Corp., Baltimore, Md.
Ryerson, Joseph T., & Son, Inc., Chicago, Ill.
Sharon Steel Corp., Sharon, Pa.
Steel Sales Corp., Chicago, Ill.
Taylor-Wharton Iron & Steel Co., High Bridge, N. J.
Tennessee Coal, Iron and R. R. Co., Birmingham, Ala.
U. S. Steel Supply Co., Chicago, Ill.
Worth Steel Co., Claymont, Del.

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Wyckoff Steel Co., Pittsburgh, Pa.
Youngstown Sheet & Tube Co., Youngstown, Ohio
Zukens Steel Co., Coatesville, Pa.

STEEL, Inconel-Clad
International Nickel Co., Inc., New York, N. Y.
Lukens Steel Co. & Divisions, Coatesville, Pa.
Steel Sales Corp., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

STEEL, Manganese 11-14%
American Manganese Steel Div., American Brake Shoe Co., Chicago Heights, Ill.
Taylor Wharton Iron & Steel Co., High Bridge, N. J.

STEEL, Monel-Clad
American Nickeloid Co., Peru, Ill.
International Nickel Co., Inc., New York, N. Y.
Lukens Steel Co. & Divisions, Coatesville, Pa.
Steel Sales Corp., Chicago, Ill.
Superior Steel Corp., Carnegie, Pa.
Williams & Co., Inc., Pittsburgh, Pa.

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Steel Sales Corp., Chicago, Ill.
Superior Steel Corp., Carnegie, Pa.
Williams & Co., Inc., Pittsburgh, Pa.

STEEL, Nickel Manganese

American Manganese Steel Div., American Brake Shoe Co., Chicago Heights, Ill.
Stulz-Sickles Co., Newark, N. J.
Taylor Wharton Iron & Steel Co., High Bridge, N. J.

STEEL, Silver-Clad

Handy & Harman, New York, N. Y.
Lukens Steel Co. & Divisions, Coatesville, Pa.
Williams & Co., Inc., Pittsburgh, Pa.

STEEL, Stainless

Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
Armco Steel Corp., Middletown, Ohio
American Steel & Wire Co., Cleveland, Ohio
Armco Steel Corp., Middletown, Ohio
Atlas Foundry Co., Irvington, N. J.
Babcock & Wilcox Tube Co., The, Beaver Falls, Pa.
Bethlehem Steel Co., Bethlehem, Pa.
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Carpenter Steel Co., The, Reading, Pa.
Central Steel & Wire Co., Chicago, Ill.
Crucible Steel Co. of America, New York, N. Y.
Eastern Stainless Steel Corp., Baltimore, Md.
Firth Sterling Steel & Carbide Corp., McKeesport, Pa.
Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
Jessop Steel Co., Washington, Pa.
Joslyn Mfg. and Supply Co., Ft. Wayne, Ind.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Lukens Steel Co. & Divisions, Coatesville, Pa.
Manganese Steel Forge Co., Philadelphia, Pa.
McCauley Alloy Sales Co., Chicago, Ill.
National Tube Co., Pittsburgh, Pa.
Page Steel & Wire Division of American Chain & Cable Co., Inc., Monessen, Pa.
Republic Steel Corp., Cleveland, Ohio
Rustless Iron and Steel Corp., Baltimore, Md.
Ryerson, Joseph T. & Son, Inc., Chicago, Ill.
Sharon Steel Corp., Sharon, Pa.
Steel Sales Corp., Chicago, Ill.
Superior Steel Corp., Carnegie, Pa., and Bridgeport, Conn.
Superior Tube Co., Norristown, Pa.
Tennessee Coal, Iron & Railroad Co., U. S. Steel Corp. Sub., Birmingham, Ala.
Timken Roller Bearing Co., Canton, Ohio
U. S. Steel Supply Co., Chicago, Ill.
Washington Steel Corp., Washington, Pa.
Williams & Co., Inc., Pittsburgh, Pa.

STEEL, Stainless-Clad

Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
Crucible Steel Co. of America, New York, N. Y.
Globe Steel Tubes Co., Milwaukee, Wis.
Granite City Steel Co., Granite City, Ill.
Ingersol Steel Div., Borg-Warner Corp., Chicago, Ill.
Jessop Steel Co., Washington, Pa.
Lukens Steel Co. & Divisions, Coatesville, Pa.
Ryerson, Joseph T. & Son, Inc., Chicago, Ill.
Sharon Steel Corp., Sharon, Pa.
Steel Sales Corp., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

STEEL TUBING

(See: "Tubing")

STOCKS and DIES, Bolt

Armstrong Bros. Tool Co., Chicago, Ill.
Bay State Tap & Die Co., Mansfield, Mass.
Beaver Pipe Tools, Inc., Warren, Ohio
Butterfield Division, Union Twist Drill Co., Derby Line, Vt.
Champion Blower and Forge Co., Lancaster, Pa.
Greenfield Tap & Die Corp., Greenfield, Mass.
Hollands Mfg. Co., Erie, Pa.
Morse Twist Drill & Machine Co., New Bedford, Mass.
Nye Tool & Machine Co., Chicago, Ill.
Oster Manufacturing Co., The, Cleveland, Ohio
Reed Manufacturing Co., Erie, Pa.
Threadwell Tap & Die Co., Greenfield, Mass.
Toledo Pipe Threading Machine Co., The, Toledo, Ohio

STONES, Rubbing and Sharpening

Bay State Abrasive Products Co., Westboro, Mass.
Behr-Manning Corp., Troy, N. Y.
Carborundum Co., The, Niagara Falls, N. Y.
Chicago Wheel & Mfg. Co., Chicago, Ill.
Cortland Grinding Wheels Corp., Chester, Mass.
Macklin Co., Jackson, Mich.
Mid-West Abrasive Co., Owosso, Mich.
Norton Co., Worcester, Mass.
Simonds Abrasive Co., Philadelphia, Pa.
Universal Wheel & Abrasive Corp., Chicago, Ill.

STOOLS and CHAIRS, Factory, Steel

Angle Steel Stool Co., Plainwell, Mich.
Lyon Metal Products, Inc., Aurora, Ill.
New Britain Machine Co., The, New Britain, Conn.
Standard Pressed Steel Co., Jenkintown, Pa.

STRAIGHTENERS, Wire

Aufhauser Bros. Co., New York, N. Y.
Lewis Machine Co., The, Cleveland, Ohio
Metallizing Engineering Co., Long Island City, N. Y.
Moslo Machinery Co., Cleveland, Ohio
Steel Sales Corp., Chicago, Ill.

STRIPPERS, Electrode

Aufhauser Bros. Co., New York, N. Y.
Moslo Machinery Co., Cleveland, Ohio

STUD WELDERS

Acro Welder Mfg. Co., Inc., Milwaukee, Wis.
Agnew Electric Co., Milford, Mich.
Alcasco Foundry & Manufacturing Co., Harvey, Ill.
Hobart Brothers Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Larkin Lectro Products, New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
Nelson Stud Welding, Div. of Morton Gregory Corp., Lorain, Ohio
Nelson Specialty Welding Equipment Co., San Leandro, Calif.
Resistance Welder Corp., Detroit, Mich.
C. H. Stevens & Co., Norwalk, Conn.
Stevenson Jordan & Harrison, New York, N. Y.
Taylor-Winfield Corp., Warren, Ohio
Thomson Electric Welder Co., Lynn, Mass.
Wonder Welding Specialties, Oakland, Calif.

STUDS, Flux-Filled

Nelson Stud Welding, Div. of Morton Gregory Corp., Lorain, Ohio
Nelson Specialty Welding Equipment Co., San Leandro, Calif.

SURFACE-HARDENING POWDER

American Manganese Steel, Div. American Brake Shoe Co., Chicago Heights, Ill.
Childs Aluminum Solder Co., New York, N. Y.
Anti-Borax Compound Co., Inc., Ft. Wayne, Ind.
Lincoln Electric Co., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Wall Colmonoy Corp., Detroit, Mich.

SWEAT BAND

American Optical Co., Southbridge, Mass.
Detroit First Aid Co., Detroit, Mich.
Fibre-Metal Products Co., The, Chester, Pa.
Industrial Products Co., Philadelphia, Pa.
Mine Safety Appliances Co., Pittsburgh, Pa.
Sellstrom Mfg. Co., Chicago, Ill.

SUBMERGED MELT

(See: "Welding, Automatic, Submerged Melt")

SWITCHES, Electric

Albert & J. M. Anderson Mfg. Co., S. Boston, Mass.
Allis-Chalmers Mfg. Co., Milwaukee, Wisc.
Arrow-Hart & Hegeman Co., Hartford, Conn.
Cutler-Hammer Mfg. Co., Milwaukee, Wis.
Friez Instrument Division, Bendix Aviation Corp., Baltimore, Md.
General Electric Co., Schenectady, N. Y.
General Electric Co., Merchandise Dept., Bridgeport, Conn.
Master Electric Co., The, Dayton, Ohio
McGill Manufacturing Co., Valparaiso, Ind.
Rees, Mackworth G., Inc., Detroit, Mich.
Shall Cross Mfg. Co., Collingdale, Pa.
Square D Co., Milwaukee, Wis.
Trumbull Electric Mfg. Co., Plainville, Conn.

SWITCHES, Safety

Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
Crouse-Hinds Co., Syracuse, N. Y.
Cutler-Hammer, Inc., Milwaukee, Wis.
Electric Controller & Mfg. Co., Cleveland, Ohio
Federal Electric Products Co., Newark, N. J.
General Electric Co., Schenectady, N. Y.
Square D Co., Milwaukee, Wis.
Trumbull Electric Mfg. Co., Plainville, Conn.
Westinghouse Electric Corp., Pittsburgh, Pa.

TABLES, Welding

Bentley Weldery, Inc., Syracuse, N. Y.
Chicago Hardware Foundry Co., North Chicago, Ill.
Cullen-Friestedt Co., Chicago, Ill.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Graves, Ed. J., Jamestown, N. Y.
Hamilton Tool Co., The, Hamilton, Ohio
Harnischfeger Corp., Milwaukee, Wisc.
Hobart Bros Co., Troy, Ohio
Linde Air Products Co., The, New York, N. Y.
Lyon Metal Products, Inc., Aurora, Ill.
Lyon-Raymond Corp., Greene, N. Y.
Ransome Machinery Co., Dunellen, N. J.
Victor Equipment Co., San Francisco, Calif.
Welded Truck & Specialty Co., Inc., Chicago, Ill.
Weldrite Co., Inc., Long Island City, N. Y.
Wiese Plow Welding Co., Perry, Iowa
Williams & Co., Inc., Pittsburgh, Pa.

TABLETS, Salt

(See: "Salt tablets, and Dispensers")

TAPES, Measuring

Dietzgen, Eugene, Co., Chicago, Ill.
Keuffel & Esser Co., Hoboken, N. J.
Lufkin Rule Co., The, Saginaw, Mich.
Master Rule Mfg. Co., Inc., New York, N. Y.
Omicron Co., The, Glendale, Calif.
Starrett, L. S., Co., The, Athol, Mass.

TEMPERATURE-INDICATING PELLETS

Gordon, Claud S. Co., Chicago, Ill.
Phillips, C. E. & Co., Detroit, Mich.
Tempil Corp., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

TERMINALS, Cable

(See: "Connectors, Cable" "Lugs, Welding Cable")

TESTING EQUIPMENT, Hardness

American Machine & Metals, Inc., East Moline, Ill.
Baldwin Locomotive Works, The, Philadelphia, Pa.
Buehler, Ltd., Chicago, Ill.
Detroit Testing Machine Co., Detroit, Mich.
Eastern Welding Equipment Co., New York, N. Y.
Gordon, Claud S. Co., Chicago, Ill.
Wilson Mechanical Instrument Co., Inc., New York, N. Y.

TESTING EQUIPMENT, Tensile

Air Reduction Sales Co., New York, N. Y.
American Machine & Metals, Inc., East Moline, Ill.
Baldwin Locomotive Works, The, Philadelphia, Pa.
Buehler Ltd., Chicago, Ill.
Detroit Testing Machine Co., Detroit, Mich.
Dillon & Co., Inc., W. C., Chicago, Ill.
Gordon, Claud S. Co., Chicago, Ill.
Fibre-Metal Products Co., The, Chester, Pa.
Independent Engineering Co., O'Fallon, Ill.
Linde Air Products Co., The, New York, N. Y.
Paulsen-Webber Cordage Corp., New York, N. Y.
Precision Scientific Co., Chicago, Ill.
Riehle Testing Machine Div., American Machine and Metals, Inc., East Moline, Ill.
Streeter-Amet Co., Chicago, Ill.
Watson-Stillman Co., Roselle, N. J.

THERMIT, Equipment & Supplies

Metal & Thermit Corp., New York, N. Y.

TIP DRILLS

Hexagon Brass Handles
In cardboard tubes
Sizes 15 to 80
1/16" and 1/8"

•

LOWEST PRICES

•

DRILL SIZE CHARTS FREE

•

DISTRIBUTORS WANTED!

•

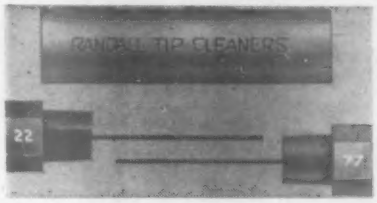
WELDING EQUIPMENT SERVICE CO.
2123 TEXAS ST.
EL PASO, TEXAS

TIMERS, Resistance-Welding

(See also: "Controls, Resistance Welding," "Electronic Control, Resistance Welding")

Automatic Temperature Control Co., Philadelphia, Pa.
Calton Co., Los Angeles, Calif.
Central Sales Corp., The, Chicago, Ill.
Clark Controller Co., The, Cleveland, Ohio
Cramer, R. W. Co., Inc., Centerbrook, Conn.
Cutler-Hammer, Inc., Milwaukee, Wis.
Eisler Engineering Co., The, Newark, N. J.
Electric Controller & Mfg. Co., The, Cleveland, Ohio
Electronic Controls, Inc., Newark, N. J.
Electronic Products Co., N. Aurora, Ill.
General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hercules Elec. & Mfg. Co., Inc., Brooklyn, N. Y.
Industrial Timer Corp., Newark, N. J.
Larkin Lectro Products Co., New York, N. Y.
Metron Instrument Co., Denver, Colo.
Mullenbach Electrical Mfg. Co., Los Angeles, Calif.

RANDALL TIP CLEANERS



• Two-Unit Tip Cleaner assures smoother cuts and better welds with clean tips. Made of non-inflammable material—any two sizes 40 to 80—85c complete with case.

• Send for free Tip Cleaner Chart—shows correct size to use on all tips.

RANDALL MANUFACTURING CO.
NORTH KANSAS CITY, MISSOURI

National Time & Signal Corp., Detroit, Mich.
Photoswitch Inc., Cambridge, Mass.
Photovolt Corp., New York, N. Y.
Pier Equip. Mfg. Co., Benton Harbor, Mich.
Potter Instrument Co., Long Island City, N. Y.
Raytheon Mfg. Corp., Waltham, Mass.
Rees, Mackworth G., Inc., Detroit, Mich.
Ripley Co., Inc., Middletown, Conn.
Sciaky Bros., Chicago, Ill.
Square D Co., Milwaukee, Wis.
Thermo Electric Mfg. Co., Dubuque, Iowa
United Cinephone Corp., Torrington, Conn.
Universal Welder Corp., Cleveland, Ohio
Vangtronic Corp., The, Bridgeport, Conn.
Weltronic Co., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.

TINNING COMPOUNDS

(See: "Compounds, Tinning")

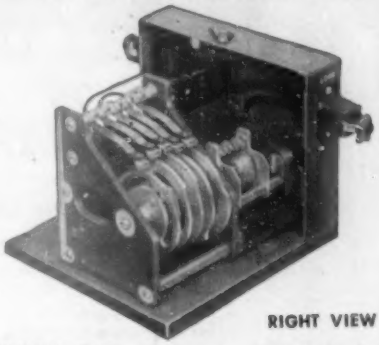
TIP CLEANERS

American Oxygen Service Corp., Harrison, N. J.
Arc Welding Supply Co., Bronx, N. Y.
Burdett Oxygen Co., Cleveland, Ohio
Craftsweld Equip. Corp., Long Island City, N. Y.
Dockson Corp., Detroit, Mich.
Eutectic Welding Alloys Corp., New York, N. Y.
Harris Calorific Co., The, Cleveland, Ohio
Imperial Brass Mfg. Co., Chicago, Ill.
Klem Chemicals, Inc., Dearborn, Mich.
Linde Air Products Co., New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
Maitlen & Benson, Inc., Long Beach, Calif.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engrg. Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welding Equip. Co., San Francisco, Calif.
New Mexico Steel Co., Albuquerque, New Mex.
Oakite Products, Inc., New York, N. Y.
Ragle, J. M. Industries, Kansas City, Mo.
Randall Mfg. Co., North Kansas City, Mo.
Taylor-Winfield Corp., The, Warren, Ohio
Thermacote Co., Los Angeles, Calif.
Smith Welding Equip. Corp., Minneapolis, Minn.

(Continued on Page 100)

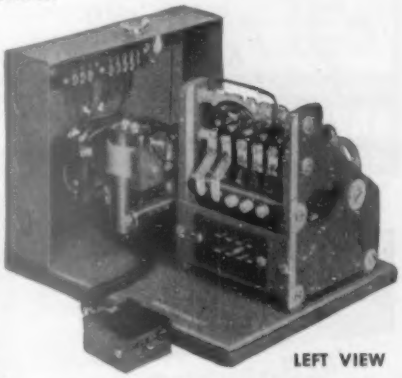
NATIONAL

WELDING TIMERS—
Made for Every Type of Resistance Welding Control.
SEQUENCING PROCESS TIMERS
—INTERVAL TIMERS
Cam Control—The VISIBLE WAY
—The ECONOMICAL WAY



RIGHT VIEW

NEMA 3B. A low cost production timer for long runs and lots of welds. Thousands in use in automobile and sheet metal plants.



LEFT VIEW

Showing another Timer Quick-Disconnect plug, and heavy contacts that sequence pressure-weld-hold-off, to ½ cycle consistency. Contacts fire Ignitron tubes without relay.

The NEW NATIONAL TIME-MINDER
All-electric, Dial-set for Timing Interval. Fixed positionable stop arm for repeat work. Pilot-lite optional—7 Ranges up to 60 Hrs.

NATIONAL TIME & SIGNAL CORPORATION
DETROIT 20, MICHIGAN

Commando TIP DRILL KIT

(Approximately actual size)

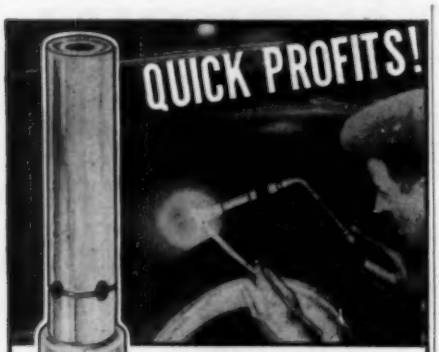
MOST PRACTICAL TIP CLEANING TOOL MADE... INEXPENSIVE, TOO!

Attractive "Silent Salesman" counter cards for dealers.

Carbon steel drills properly clean cutting and welding tips and true up damaged holes. Tempered steel double end chuck holds drill sizes 45 to 80. Handle holds up to 24 different size drills. *Complete* with pocket clip and 12 assorted drills, even number sizes 52 to 74, inclusive, *only $3.50.*

SEE YOUR NEAREST DEALER OR WRITE DIRECT TO

J. M. RAGLE INDUSTRIES
4029 INDIANA AVE. KANSAS CITY 4, MO.



The Original
SLIP-ON SOLDERING TIP
U.S. PAT. # 2294816
A Proven Soldering Aid!

Takes guesswork out of soldering. Saving time and money. This handy Slip-On Soldering Tip fits any welding torch, operates on the simple principle of the Bunsen burner—uses air instead of tank oxygen—cuts acetylene costs in half—saves solder.

SIZES:
Flame 1" Wide:
No. 1-A Fits Small Torch
No. 1-B Fits Large Torch
Flame 2" Wide:
No. 2-A Fits Small Torch
No. 2-B Fits Large Torch

Mfg'd. by
HANDY TIP CO., TOLEDO, O.

Sole National Distributors
ANZICK MFG. CO.
JOBBERS WANTED WRITE TODAY!
20787 MOUND ROAD VAN DYKE, MICH.

DOUBLE DUTY
from your Welding Torch
with a

BINGO
SOLDER KIT

Easy to Use . . . Bingo slips on over the tip of your welding torch and uses acetylene only.
Efficient . . . Provides and air-acetylene flame that is ideal for body soldering, tinning and silver soldering
Economical . . . Comes complete with No. 1 and No. 2 tips for only $2.75 Savings in oxygen alone will seen pay for this kit

See Your Distributer or Order Direct

DISTRIBUTORS! Write for complete details.

BEAVERDELL Inc.
4465 Lincoln Ave Chicago, Ill.

TIP CLEANERS

(Continued from Page 99)

Victor Equipment Co., San Francisco, Calif.
Welding & Cutting Materials Co., North Kansas City, Mo.
Welding Equipment Service Co., El Paso, Texas
Williams & Co., Inc., Pittsburgh, Pa.
Wolfe-Kote Co., Inc., Sheboygan, Wis.

TIPS, Cutting Flame

Air Reduction Sales Co., New York, N. Y.
Arc Welding Supply Co., Bronx, N. Y.
Bastian-Blessing Co., The, Chicago, Ill.
Black Mfg. Co., The, Baltimore, Md.
Burdett Oxygen Co., Cleveland, Ohio
Cleveland Precision Ring & Products Co., Cleveland, Ohio
Craftsweld Equipment Corp., Long Island City, N. Y.
Dockson Corp., Detroit, Mich.
Eutectic Welding Alloys Corp., New York, N. Y.
General Welding & Equipment Co., Boston, Mass.
Goss Gas, Inc., Pittsburgh, Pa.
Harris Calorific Co., The, Cleveland, Ohio
Imperial Brass Mfg. Co., Chicago, Ill.
K-G Welding & Cutting Co., New York, N. Y.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
Metro Mfg. Co., Long Island City, N. Y.
Miles, John R. R., Inc., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
Nageldinger & Sons, Inc., J., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Welding Equipment Co., San Francisco, Calif.
Smith Welding Equipment Corp., Minneapolis, Minn.
Victor Equipment Co., San Francisco, Calif.
Welders Supply & Mfg. Co., The, Cincinnati, Ohio
Weldit Inc., Detroit, Mich.

TIPS, Soldering

Acet-A-Tip Co., Chicago, Ill.
Anzick Mfg. Co., Van Dyke, Mich.
Bastian-Blessing Co., The, Chicago, Ill.
Beaverdell Co., Chicago, Ill.
Burdett Oxygen Co., Cleveland, Ohio
Cesco Products, Inc., Chicago, Ill.
Dockson Corp., Detroit, Mich.
Eutectic Welding Alloys Corp., New York, N. Y.
General Welding & Equip. Co., Boston, Mass.
Goss Gas, Inc., Pittsburgh, Pa.
Harris Calorific Co., The, Cleveland, Ohio
Imperial Brass Mfg. Co., Chicago, Ill.
K-G Welding and Cutting Co., Inc., New York, N. Y.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The Wall Chemicals Div., Chicago, Ill.
Mallory, P. R., & Co., Inc., Indianapolis, Ind.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Mfg. Co., Long Island City, N. Y.
Miles, John R. R., Inc., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
National Welding Equipment Co., San Francisco, Calif.
Powder Weld Process Co., The, Brooklyn, N. Y.
Purity Cylinder Gases, Inc., Grand Rapids, Mich.
Ragle Industries, J. M., Kansas City, Mo.
Sight Feed Generator Co., The, Richmond, Ind.
Smith Welding Equip. Corp., Minneapolis, Minn.
Stanley Tools, Div. of the Stanley Works, New Britain, Conn.
Victor Equipment Co., San Francisco, Calif.
Welders Supply & Mfg. Co., The, Cincinnati, Ohio

TIPS, Welding, Gas

Air Reduction Sales Co., New York, N. Y.
Arc Welding Supply Co., Bronx, N. Y.
Bastian-Blessing Co., The, Chicago, Ill.
Black Mfg. Co., The, Baltimore, Md.
Burdett Oxygen Co., Cleveland, Ohio
Cleveland Precision Ring & Prod. Co., Cleveland, Ohio
Craftsweld Equipment Corp., Long Island City, N. Y.
Dockson Corp., Detroit, Mich.
Eagle Welding Equipment Co., Chicago, Ill.
Eutectic Welding Alloys Corp., New York, N. Y.
General Welding & Equip. Co., Boston, Mass.
Goss Gas, Inc., Pittsburgh, Pa.
K-G Welding & Cutting Co., New York, N. Y.
Harris Calorific Co., The, Cleveland, Ohio
Imperial Brass Mfg. Co., Chicago, Ill.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Mfg. Co., Long Island City, N. Y.
Miles, John R. R., Inc., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
Nageldinger & Son, Inc., J., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Welding Equip. Co., San Francisco, Calif.
Powder Weld Process Co., The, Brooklyn, N. Y.
Ragle, J. M., Industries, Kansas City, Mo.
Smith Welding Equipment Corp., Minneapolis, Minn.
Victor Equipment Co., San Francisco, Calif.
Welders Supply & Mfg. Co., The, Cincinnati, Ohio
Weldit Inc., Detroit, Mich.
Williams & Co., Inc., Pittsburgh, Pa.

TOOLS, Beveling for Welding Pipe

Beaver Pipe Tools, Inc., Warren, Ohio
Oster Mfg. Co., The, Cleveland, Ohio

TOOLS, Weld-Cleaning

(See also "Brushes," "Weld-Cleaning," "Hammers, Chipping and Sealing (Hand), Electric; Pneumatic, etc.")

Air Reduction Sales Co., New York, N. Y.
American Agile Corp., Cleveland, Ohio
Atlas Welding Accessories Co., Ferndale, Mich.
Black & Decker Mfg. Co., Towson, Md.
Buckeye Tool Corp., Dayton, Ohio
Burdett Oxygen Co., Cleveland, Ohio
Carter-Lockard Co., Los Angeles, Calif.
Chicago Mfg. & Distributing Co., Chicago, Ill.
Chicago Pneumatic Tool Co., New York, N. Y.
Cincinnati Tool Co., Norwood, Cincinnati, Ohio
Cleco Div., Reed Roller Bit Co., Houston, Texas.
Coast Pneumatic Tool Co., Los Angeles, Calif.
Dallett Co., The, Philadelphia, Pa.
Eisler Engineering Co., Inc., Newark, N. J.
Electric Arc, Inc., Newark, N. J.
Hobart Brothers Co., Troy, Ohio
Ind. Pneumatic Tool Co., Aurora, Ill.
Industrial Products Co., Philadelphia, Pa.
Ingersoll-Rand Co., New York, N. Y.
Keller Tool Co., Grand Haven, Mich.
Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
Manufacturing Brush Co., The, Cleveland, Ohio
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Master Pneumatic Tool Co., Inc., Orwell, Ohio
Osborn Manufacturing Co., The, Cleveland, Ohio
Quality Tools Corp., New Wilmington, Pa.
Rotor Tool Co., The, Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Wyzenbeek & Staff, Inc., Chicago, Ill.

TORCH LIGHTERS

(See: "Lighters, Torch")

TORCHES, Arc

(See: "Torches, Carbon Arc")

TORCHES, Atomic-Hydrogen

General Electric Co., Schenectady, N. Y.

TORCHES, Blow, Hand—Alcohol, Gasoline, Kerosene, Gas

Aeroil Burner Co., Inc., West New York, N. J.
Bernz, Otto, Co., Inc., Rochester, N. Y.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Clements Mfg. Co., Chicago, Ill.
Diener, Geo. W., Mfg. Co., Chicago, Ill.
Eagle Manufacturing Co., Wellsburg, W. Va.
Gem Manufacturing Co., Pittsburgh, Pa.
Goss Gas, Inc., Pittsburgh, Pa.
Justrite Manufacturing Co., Chicago, Ill. (Gasoline, benzine and naphtha).
Selas Corp. of America, Philadelphia, Pa. (Gas only)
Turner Brass Works, The, Sycamore, Ill.

Sight Feed Generator Co., The, Richmond, Ind.
Smith Corp., A. O., Milwaukee, Wis.
Sterling Utilities Co., Inc., Brooklyn, N. Y.
Tri-Arc Corp., Chicago, Ill.
Trindl Products Ltd., Chicago, Ill.
Twentieth Century Mfg. Co., Minneapolis, Minn.
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Welding Service Sales, Inc., San Francisco, Calif.
Westinghouse Elec. Corp., Pittsburgh, Pa.
Williams & Co., Inc., Pittsburgh, Pa.

TORCHES, Cutting Flame

Air Reduction Sales Co., New York, N. Y.
Arc Welding Supply Co., Bronx, N. Y.
Bastian-Blessing Co., The, Chicago, Ill.
Burdett Oxygen Co., Cleveland, Ohio
Cleveland Precision Ring & Products Co., Cleveland, Ohio
Craftsweld Equip. Corp., Long Island City, N. Y.
Dockson Corp., Detroit, Mich.
Eagle Welding Equipment Co., Chicago, Ill.
Eutectic Welding Alloys Corp., New York, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
General Welding & Equip. Co., Boston, Mass.
Goss Gas, Inc., Pittsburgh, Pa.
Hamilton Tool Co., The, Hamilton, Ohio
Harris Calorific Co., The, Cleveland, Ohio
Imperial Brass Mfg. Co., The, Chicago, Ill.
K-G Welding & Cutting Co., New York, N. Y.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Wall Chem. Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Mfg. Co., Long Island City, N. Y.
Miles, John R. R., Inc., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
Nageldinger & Son, Inc., J., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Welding Equip. Co., San Francisco, Calif.
Oxweld Railroad Service Co., Chicago, Ill.
Smith Welding Equip. Corp., Minneapolis, Minn.
Victor Equipment Co., San Francisco, Calif.

TORCHES, Cutting Underwater

Air Reduction Sales Co., New York, N. Y.
American Oxygen Service Corp., Harrison, N. J.
Bastian-Blessing Co., The, Chicago, Ill.
Chicago Tool and Engineering Co., Chicago, Ill.
Craftsweld Equip. Corp., Long Island City, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
Harris Calorific Co., The, Cleveland, Ohio
K-G Welding & Cutting Co., Inc., New York, N. Y.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
Thompson Engineering Co., Grand Rapids, Mich.
Victor Equipment Co., San Francisco, Calif.
Weldit, Inc., Detroit, Mich.
Williams & Co., Inc., Pittsburgh, Pa.

TORCHES, Inert Gas Shielded Arc

Air Reduction Sales Co., New York, N. Y.
Bernard Welding Equip. Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Linde Air Products Co., The, New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.

TORCHES, Cutting

(See: "Cutting Torches," "Cutting Torches, Under Water," "Cutting Machines, Gas")

TORCHES, Powder-Cutting

Linde Air Products Co., The, New York, N. Y.
General Scientific Equip. Co., Philadelphia, Pa.
National Cylinder Gas Co., Chicago, Ill.

TORCHES, Powder-Welding

General Scientific Equip. Co., Philadelphia, Pa.
Powder Weld Process Co., The, Brooklyn, N. Y.

TORCHES, Blow, Portable — Gasoline, Kerosene, Distillate, Gas

Aeroil Burner Co., Inc., West New York, N. J.
Bernz, Otto, Co., Inc., Rochester, N. Y.
Clayton and Lambert Mfg. Co., Louisville, Ky.
Clements Mfg. Co., Chicago, Ill.
Gem Manufacturing Co., Pittsburgh, Pa.
Hauck Manufacturing Co., Brooklyn, N. Y.
Johnson Gas Appliance Co., Cedar Rapids, Iowa (Tank gas)
Linde Air Products Co., The Unit of Union Carbide and Carbon Corp., New York, N. Y. (Acetylene).
MacLeod Co., The, Cincinnati, Ohio
Mahr Mfg. Co., Div. Diamond Iron Works, Minneapolis, Minn.
Torit Manufacturing Co., St. Paul, Minn. (Kerosene only)
Turner Brass Works, The, Sycamore, Ill.

TORCHES, Brazing

Allmand Bros. Mfg. Co., Holdrege, Neb.
Atkins, E. C. & Co., Indianapolis, Ind.
Bastian-Blessing Co., The, Chicago, Ill.
Borm Manufacturing Co., Elgin, Ill.
Burdett Oxygen Co., Cleveland, Ohio
Cleveland Precision Ring & Products Co., Cleveland, Ohio
Craftsweld Equip. Corp., Long Island City, N. Y.
Dockson Corp., Detroit, Mich.
Eutectic Welding Alloys Corp., New York, N. Y.
Forney Mfg. Co., Ft. Collins, Colo.
General Scientific Equip. Co., Philadelphia, Pa.
General Welding & Equip. Co., Boston, Mass.
Harris Calorific Co., The, Cleveland, Ohio
Hoke Inc., Englewood, N. J.
Imperial Brass Mfg. Co., The, Chicago, Ill.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
Nageldinger & Son, Inc., J., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Welding Equip. Co., San Francisco, Calif.
Powder Weld Process Co., Brooklyn, N. Y.
Purity Cylinder Gases, Inc., Grand Rapids, Mich.
Smith, A. O., Corp., Milwaukee, Wis.
Smith Welding Equip. Corp., Minneapolis, Minn.
Victor Equipment Co., San Francisco, Calif.
Williams & Co., Inc., Pittsburgh, Pa.

TORCHES, Carbon-Arc

Air Reduction Sales Co., New York, N. Y.
Allen Electric and Equip. Co., Kalamazoo, Mich.
Albert & J. M. Anderson Mfg. Co., S. Boston, Mass.
Allmand Bros. Mfg. Co., Holdredge, Nebr.
American Oxygen Service Corp., Harrison, N. J.
Birdsell Mfg. Co., Los Altos, Calif.
Borm Mfg. Co., Elgin, Ill.
Cesco Products, Inc., Chicago, Ill.
Chicago Tool & Engineering Co., Chicago, Ill.
Craftsweld Equipment Corp., Long Island City, N. Y.
Electric Arc, Inc., Newark, N. J.
Ergolyte Mfg. Co., Philadelphia, Pa.
Eutectic Welding Alloys Corp., New York, N. Y.
Faulk, F. R., Pittsburgh, Pa.
Forney Mfg. Co., Ft. Collins, Colo.
General Scientific Equip. Co., Philadelphia, Pa.
Hammet Elec. Mfg. Co., Kansas City, Mo.
Hollup Corp., Chicago, Ill.
Larkin Lectro Products, New York, N. Y.
Lee, K. O. Co., Aberdeen, S. D.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Mid-States Equip. Corp., Chicago, Ill.
Miller Elec. Mfg. Co., Appleton, Wisc.
National Welders Supply Co., Charlotte, N. C.
Patent Specialties, Inc., New York, N. Y.
Phillips, C. E. & Co., Detroit, Mich.
Plymouth Equipment & Supply Co., Plymouth, Mich.

TORCHES, Preheating

Aeroil Products Co., West New York, N. J.
Air Reduction Sales Co., New York, N. Y.

Multi-Pic
—the weld cleaner which Follows the Contour

A single hammer with 5 separate pick-pointed tool steel heads locked in free-floating guide plates. All 5 picks strike at one blow with equal force adjusting themselves to the uneven contour of the surface to remove slag, oxide and rust *quicker, easier* and *cleaner* than ever before.

Write Today* for prices and illustrated folder with photographs and diagrams showing how Multi-Pic saves *time—effort —money.

BERNARD
WELDING EQUIPMENT CO.
741-743 East 71st Street
Chicago 19, Illinois

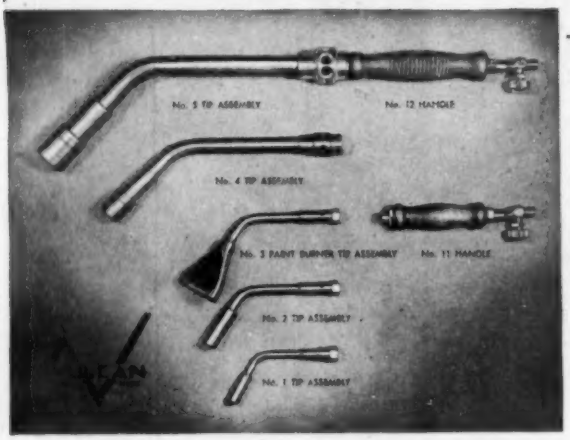
Bastian-Blessing Co., The, Chicago, Ill.
Borm Mfg. Co., Elgin, Ill.
Burdett Oxygen Co., The, Cleveland, Ohio
Cesco Products, Inc., Chicago, Ill.
Clayton & Lambert Mfg. Co., Detroit, Mich.
Dockson Corp., Detroit, Mich.
Eutectic Welding Alloys Corp., New York, N. Y.
General Scientific Equip Co., Philadelphia, Pa.
General Welding & Equip. Co., Boston, Mass.
Harris Calorific Co., The, Cleveland, Ohio
Hauck Mfg. Co., Brooklyn, N. Y.
Holden, A. F. Co., The, New Haven, Conn.
Imperial Brass Mfg. Co., Chicago, Ill.
Insto-Gas Corp., Detroit, Mich.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
MacLeod Co., The, Cincinnati, Ohio
Mahr Mfg. Co., Div. Diamond Iron Works, Minneapolis, Minn.

(Continued on Page 102)

RUGGED!

ATLAS
WELD CLEANING TOOLS
14 MODELS
Solar steel heads • Induction hardened • Silver brazed steel handles • Metal or wood grips • Perfect balance.
ATLAS WELDING ACCESSORIES CO.
707 E. LEWISTON DETROIT 20, MICH.

VULCAN-UNIVERSAL PROPANE-AIR PRE-HEATING EQUIPMENT . . .



Check these features:

Tip assemblies and handles are interchangeable and may be securely connected without use of wrench. Vulcan Regulators insure constant delivery pressures. Mixing chambers are remote from tip ends, assuring perfect mixture under all operating conditions, producing highly stable flames that cannot blow out in wind or rain more smother in "pockets." The easy grip handle is cool and comfortable.

VULCAN-UNIVERSAL equipment is modern, safe, fast and economical. Use with any of the bottled Propane or Butane gases and injects its own air—no compressed air necessary. A wide range of applications include—annealing, bending, brazing, forming, de-scaling, heat-treating, pre-heating, paint burning, and soldering. See your nearest distributor or write direct for catalogue and price list.

PURITY CYLINDER GASES, INC.

Dept. V

574 South Division Avenue Grand Rapids, Michigan

Alweld

THE COMPLETE LINE OF CYLINDER TRUCKS

Tandem-Type Cylinder Truck unloads easily from front and rear. Available with semi-pneumatic tires. Carries all sizes of cylinders. Order from your distributor. Write for literature.

Distributorships available.

WELDED TRUCK

AND SPECIALTY CO.

1849 W. Grand Ave., Chicago 22, Illinois

TORCHES, Preheating

(Continued from Page 101)

National Cylinder Gas Co., Chicago, Ill.
National Welding Equipment Co., San Francisco, Calif.
Oxweld Railroad Service Co., The, Chicago, Ill.
Peterson Welding Lab., Kansas City, Mo.
Purity Cylinder Gases, Inc., Grand Rapids, Mich.
Selas Corp. of America, Philadelphia, Pa.
Smith Welding Equipment Corp., Minneapolis, Minn.
Unique Mfg. Co., Inc., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Wall Colmonoy Corp., Detroit, Mich.
Weldit, Inc., Detroit, Mich.

TORCHES, Welding, Gas

Air Reduction Sales Co., New York, N. Y.
Albert & J. M. Anderson Mfg. Co., Boston, Mass.
American Oxygen Service Corp., Harrison, N. J.
Arc Welding Supply Co., Bronx, N. Y.
Bastian-Blessing Co., Chicago, Ill.
Black Mfg. Co., The, Baltimore, Md.
Burdett Oxygen Co., Cleveland, Ohio
Chicago Tool and Engineering Co., Chicago, Ill.
Craftsweld Equip. Corp., Long Island City, N. Y.
Dill Mfg. Co., Cleveland, Ohio
Dockson Corp., Detroit, Mich.
Eagle Welding Equipment Co., Chicago, Ill.
General Scientific Equip. Co., Philadelphia, Pa.
General Welding & Equipment Co., Boston, Mass.
Goss Gas, Inc., Pittsburgh, Pa.
Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.
Harris Calorific Co., The, Cleveland, Ohio
Imperial Brass Mfg. Co., Chicago, Ill.
Insto-Gas Corp., Detroit, Mich.
K-G Welding & Cutting Co., New York, N. Y.
Linde Air Products Co., The, New York, N.Y.
Liquid Carbonic Corp., Wall Chemicals Div. Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Mfg Co., Long Island City, N. Y.
Miles, John R. R., Inc., Minneapolis, Minn.
Modern Engineering Co., St. Louis, Mo.
Nageldinger & Son, Inc., J., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N.C.
National Welding Equipment Co., San Francisco, Calif.
Oxweld Railroad Service Co., The, Chicago, Ill.
Powder Weld Co., The, Brooklyn, N. Y.
Rall Supply Co., New York, N. Y.
Smith Welding Equipment Corp., Minneapolis, Minn.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Thompson Engineering Co., Grand Rapids, Mich.
Torit Mfg. Co., St. Paul, Minn.
Trex Engineering Supply Co., Newark, N. J.
Victor Equipment Co., San Francisco, Calif.
Welders Supply & Mfg. Co., Cincinnati, Ohio
Weldit Inc., Detroit, Mich.
Williams & Co., Inc., Pittsburgh, Pa.

TOTALIZERS, Arc Time

D-V Welding Controls, Oakland, Calif.
Harnischfeger Corp., Milwaukee, Wis.

TRAILERS, Welder

Electric Arc, Inc., Newark, N. J.
General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Bros. Co., Troy, Ohio
Lincoln Elec. Co., The, Cleveland, Ohio
Sciaky Bros., Chicago, Ill.
Shrader, F. W., Co., Culver City, Calif.
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Westinghouse Electric Corp., Pittsburgh, Pa.

TRANSFORMERS, Arc Welding

(See: "Welders, Arc, A-C")

TRANSFORMERS, Resistance Welding

Acro Welder Mfg. Co., Milwaukee, Wis.
Agnew Electric Co., Milford, Mich.
Ames Spot Welder Co., Inc., Brooklyn, N. Y.
Banner Products Co., Milwaukee, Wis.
Burdett Oxygen Co., Cleveland, Ohio
Detroit Electronic Products Co., Detroit, Mich.
Eisler Engineering Co., Inc., Newark, N. J.
Electric Arc, Inc., Newark, N. J.
Eutectic Welding Alloys Corp., New York, N. Y.
Federal Machine & Welder Co., The, Warren, Ohio
Franklin Transformer Mfg. Co., Minneapolis, Minn.
General Electric Co., Schenectady, N. Y.
Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.
Gulow Corp., The, New York, N. Y.
Hampton Electric Mfg. Co., Pittsburgh, Pa.
Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Hevi-Duty Electric Co., Milwaukee, Wis.
Larkin Lectro Prod. Co., New York, N. Y.
Marcus Transformer Co., Inc., Hillside, N. J.
Martin Electric Co., Detroit, Mich.
National Electric Weld. Machine Co., Bay City, Mich.
Pier Equipment Mfg. Co., Benton Harbor, Mich.
Precision Welder & Machine Co., Cincinnati, Ohio
Progressive Welder Co., Detroit, Mich.
Raython Mfg. Corp., Waltham, Mass.
Resistance Welder Corp., Detroit, Mich.
Sciaky Bros., Chicago, Ill.
Sterling Utilities Co., Inc., Brooklyn, N. Y.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., The, Warren, Ohio
Thompson Electric Welder Co., Lynn, Mass.
Universal Welder Corp., Cleveland, Ohio
Weldex, Inc., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.

TRUCKS, Cylinder

Adams Mfg. & Supply Co., Los Angeles, Calif.
Air Reduction Sales Co., New York, N. Y.
American Oxygen Service Corp., Harrison, N. J.
Beaverdell Co., Chicago, Ill.
Burdett Oxygen Co., Cleveland, Ohio
Cesco Products, Inc., Chicago, Ill.
Craftsweld Equip. Corp., Long Island City, N. Y.
Dockson Corp., Detroit, Mich.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Garlinghouse Brothers, Los Angeles, Calif.
Imperial Brass Mfg. Co., Chicago, Ill.
Independent Engineering Co., O'Fallon, Ill.
Industrial Products Co., Philadelphia, Pa.
K-G Welding & Cutting Co., Inc., New York, N. Y.
Lewis-Shepard Sales Corp., Boston, Mass.
Linde Air Products Co., The, New York, N.Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
MacDonald Co., Inc., The, Reno, Nev.
Marquette Mfg. Co., Minneapolis, Minn.
Miles, John R. R., Inc., Minneapolis, Minn.
Modern Engineering Co., St. Louis, Mo.

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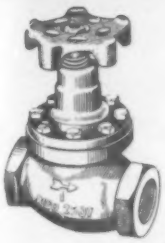

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Stuart Oxygen Co., San Francisco, Calif.
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Universal Power Corp., Cleveland, Ohio
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Weldit, Inc., Detroit, Mich.
Weldrite Co., Inc., Long Island City, N. Y.

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Globe Steel Tubes Co., Milwaukee, Wis.
McKay Machine Co., Youngstown, Ohio
Oxweld R.R. Service Co., The, Chicago, Ill.
Yoder Co., The, Cleveland, Ohio
Youngstown Foundry & Machine Co., Youngstown, Ohio

TUBES, Power Conversion

(See: "Electronic Tubes")

TUBES, Power Rectifier

(See: "Electronic Tubes")

TUBES, Welding Control

(See: "Electronic Tubes")

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Reynolds Metals Co., Louisville, Ky.

TUBING — Brass and Copper

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American Brass Co., The, American Metal Hose Branch, Waterbury, Conn.
Ampco Metal, Inc., Milwaukee, Wis.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Imperial Brass Mfg. Co., Chicago, Ill.
Parker Alliance Co., Inc., The, Cleveland, Ohio
Revere Copper & Brass, Inc., N. Y., N. Y.
Scovill Mfg. Co., Waterbury, Conn.
Steel Sales Corp., Chicago, Ill.
United Wire & Supply Corp., Providence, R.I.
Williams & Co., Inc., Pittsburgh, Pa.

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Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
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Babcock & Wilcox Tube Co., The, Alliance, Ohio (welded) and Beaver Falls, Pa. (seamless)
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Bundy Tubing Co., Detroit, Mich.
Byers Co., A. M., Pittsburgh, Pa.
Callite Tungsten Corp., Union City, N. J.
Carpenter Steel Co., The, Reading, Pa.
Castle, A. M., & Co., Chicago, Ill.
Central Steel and Wire Co., Chicago, Ill.
Globe Steel Tubes Co., Milwaukee, Wis.
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Michigan Steel Tube Products Co., Detroit, Mich.
National Tube Co., Pittsburgh, Pa.
Ohio Seamless Tube Co., The, Shelby, Ohio
Pittsburgh Steel Co., Pittsburgh, Pa.
Republic Steel Corp., Steel & Tube Div., Cleveland, Ohio
Revere Copper & Brass Inc., N. Y., N. Y.
Ryerson, Joseph T. & Sons, Inc., Chicago, Ill.
SKF Steels, Inc., New York, N. Y.
Standard Tube Co., The, Detroit, Mich.
Steel Sales Corp., Chicago, Ill.
Superior Tube Co., Norristown, Pa.
Superior Steel Corp., Chicago, Ill.
Trent Tube Mfg. Co., East Troy, Wis. (stainless and inconel only)
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Tubular Service Corp., New York, N. Y.
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UNIONS, Hose

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Craftsweld Equip. Corp., Long Island City, N. Y.
Crane Co., Chicago, Ill.
Goss Gas, Inc., Pittsburgh, Pa.
Miles, John R. R., Inc., Minneapolis, Minn.
Nageldinger & Son, Inc., J. New York, N. Y.
National Welding Equip. Co., San Francisco, Calif.
Paasche Airbrush Co., Chicago, Ill.

VALVES, Air Line

Bastian-Blessing Co., The, Chicago, Ill.
Black Manufacturing Co., Baltimore, Md.
Brunner Manufacturing Co., Utica, N. Y.
Caltron Co., Los Angeles, Calif.
Cash, A. W., Valve Mfg. Co., Decatur, Ill.
Cleco Div., Reed Roller Bit Co., Houston, Texas

(Continued on Page 104)

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VALVES, Air Line

(Continued from Page 103)

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Curtis Pneumatic Machinery, Div. of Curtis Mfg. Co., St. Louis, Mo.
Dallett Co., The, Philadelphia, Pa.
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Dixon Valve & Coupling Co., Philadelphia, Pa.
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Fairbanks Co., The, New York, N. Y.
Farris Engineering Co., Palisades Park, N. J.
Fibre-Metal Products Co., The, Chester, Pa.
Grinnell Co., Inc., Providence, R. I.
Hancock Valve Division, Manning, Maxwell & Moore, Inc., Bridgeport, Conn.
Hannafin Corp., Chicago, Ill.
Hoke Inc., Englewood, N. J.
Homestead Valve Mfg. Co., Coraopolis, Pa.
Hose Accessories Co., Philadelphia, Pa.
Hunt, C. B., & Son, Salem, Ohio
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Nageldinger & Son, Inc., J., New York, N. Y.
National Welding Equip. Co., San Francisco, Calif.
Ohio Injector Co., The, Wadsworth, Ohio
Paasche Airbrush Co., Chicago, Ill.
Parker Alliance Co., The, Cleveland, Ohio
Powell, Wm., Co., The, Cincinnati, Ohio
R. S. Products Corp., Philadelphia, Pa.
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Schrader's, A., Son, Division of Scovill Manufacturing Co., Inc., Brooklyn, N. Y.
Snap-Tite, Inc., Erie, Pa.
Stewart-Warner Corp., Chicago, Ill.
Studebaker Machine Co., Maywood, Ill.

VALVES, Cylinder

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Bastian-Blessing Co., The, Chicago, Ill.
Burdett Oxygen Co., Cleveland, Ohio
Hunt, C. B., & Son, Inc., Salem, Ohio
Kerotest Mfg. Co., Pittsburgh, Pa.
Linde Air Products Co., The, New York, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welding Equip. Co., San Francisco, Calif.
Nageldinger & Son, Inc., J., New York, N. Y.
Progressive Welder Co., Detroit, Mich.
Trex Engineering Supply Co., Newark, N. J.
Victor Equipment Co., San Francisco, Calif.

VALVES, Oxygen-Cushioned

Chek-Shock Mfg. Co., Fowler, Calif.
Linde Air Products Co., The, New York, N. Y.
Nageldinger & Son, Inc., J., New York, N. Y.

VALVES, Piping

Automatic Temperature Control Co., Philadelphia, Pa.
Bastian-Blessing Co., The, Chicago, Ill.
Crane Co., Chicago, Ill.
Grinnell Co., Inc., Providence, R. I.
Haynes Stellite Co., New York, N. Y.
Nageldinger & Son, Inc., J., New York, N. Y.
National Welding Equipment Co., San Francisco, Calif.
Parker Appliance Co., The, Cleveland, Ohio
Reading-Pratt & Cady Division of American Chain & Cable Co., Inc., Reading, Pa.
R-S Products Corp., Philadelphia, Pa.
Superior Valve & Fittings Co., Pittsburgh, Pa.
United Blower Co., Inc., New York, N. Y.
Watson-Stillman Co., Roselle, N. J.
Youngstown Welding & Engineering Co., The, Youngstown, Ohio

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(See also: "Hose, Ventilating" Also See: "Fans," "Exhaust," "Collectors, Exhausters and Blower Systems," etc.)

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Air Reduction Sales Co., New York, N. Y.
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Chelsea Fan & Blower Co., Inc., Irvington, N. J.
De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Detroit Stamping Co., Detroit, Mich.
General Blower Co., Chicago, Ill.
Graybar Electric Co., New York, N. Y.
Ilg Elec. Ventilating Co., Chicago, Ill.
Metal Bond Mfg. Co., St. Louis, Mo.
Mine Safety Appliances Co., Pittsburgh, Pa.
Powermatic Ventilating Co., Cleveland, Ohio
Ruemelin Mfg. Co., Milwaukee, Wis.
Schneible, Claude B., Co., Chicago, Ill.
Smith Corp., A. O., Milwaukee, Wis.
Standard Safety Equipment Co., Chicago, Ill.
Torit Mfg. Co., St. Paul, Minn.
United Blower Co., New York, N. Y.
Victor Equipment Co., San Francisco, Calif.
Whiting Corp., Harvey, Ill.
Wilson Welder & Metals, Inc., New York, N. Y.

VISES, Bench

American Chain Division of American Chain & Cable Co., Inc., York, Pa.
American Pipe Tool Co., Chicago, Ill.
American Scale Co., Kansas City, Mo.
Athol Machine & Foundry Co., Athol, Mass.
Cardinal Machine Co., Glendale, Calif.
Chicago Tool & Engineering Co., Chicago, Ill.
Columbian Vise & Mfg. Co., The, Cleveland, Ohio
Desmond-Stephan Mfg. Co., Urbana, Ohio
Disston, Henry & Sons, Inc., Tacony, Philadelphia, Pa.
Grand Specialties Co., Chicago, Ill.
Hollands Mfg. Co., Erie, Pa.
Kalamazoo Tank & Silo Co., Kalamazoo, Mich.
Kempsmith Machine Co., Chicago, Ill.
Millers Falls Co., Greenfield, Mass.
Morgan Vise Co., Chicago, Ill.
Munton Mfg. Co., Franklin Park, Ill.
Parker, Charles, Co., The, Meriden, Conn.
Peck, Stow & Wilcox Co., Southington, Conn.
Production Devices, Inc., Whitehall, N. Y.
Richards-Wilcox Mfg. Co., Aurora, Ill.
Ridge Tools Co., The, Elyria, Ohio
Stanley Tools, Division of The Stanley Works, New Britain, Conn.
Studebaker Machine Co., Chicago, Ill.
Wilton Tool Mfg. Co., Chicago, Ill.

VISES, Combination

American Scale Co., Kansas City, Mo.
Desmond-Stephan Mfg. Co., The, Urbana, Ohio

Grand Specialties Co., Chicago, Ill.
Morgan Vice Co., Chicago, Ill.
New Hall Chain Forge & Iron Co., Westwood, N. J.
Wilton Tool Mfg. Co., Chicago, Ill.

VISES, Hand and Pin

Chicago Tool & Engineering Co., Chicago, Ill.
Millers Falls Co., Greenfield, Mass.
Smith, Seymour & Son, Inc., Oakville, Conn.
Starrett, L. S., Co., The, Athol, Mass.
Studebaker Machine Co., Maywood, Ill.

VISES, Hydraulic

Munton Mfg. Co., Franklin Park, Ill.
Production Devices, Inc., Whitehall, N. Y.

VISES, Machinists'

American Chain Division of American Chain & Cable Co., Inc., York, Pa.
American Scale Co., Kansas City, Mo.
Athol Machine & Foundry Co., Athol, Mass.
Brown & Sharpe Mfg. Co., Providence, R. I.
Cardinal Machine Co., Glendale, Calif.
Chicago Tool & Engineering Co., Chicago, Ill.
Columbian Vise & Mfg. Co., The, Cleveland, Ohio
Desmond-Stephan Mfg. Co., Urbana, Ohio
Grand Specialties Co., Chicago, Ill.
Hollands Mfg. Co., Erie, Pa.
Kempsmith Machine Co., Chicago, Ill.
Morgan Vise Co., Chicago, Ill.
Munton Mfg. Co., Franklin Park, Ill.
North Bros. Mfg. Co., Division of The Stanley Works, Philadelphia, Pa.
Parker, Charles Co., The, Meriden, Conn.
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Reed Manufacturing Co., Erie, Pa.
Skinner Chuck Co., The, New Britain, Conn.
Stanley Tools, Div. of the Stanley Works, New Britain, Conn.
Studebaker Machine Co., Maywood, Ill.
Universal Engineering Co., San Diego, Calif.
Wilton Tool Mfg. Co., Chicago, Ill.

VISES, Pipe

American Pipe Tool Co., Chicago, Ill.
American Scale Co., Kansas City, Mo.
Armstrong Bros. Tool Co., Chicago, Ill.
Athol Machine & Foundry Co., Athol, Mass.
Beaver Pipe Tools, Inc., Warren, Ohio
Billings & Spencer Co., The, Hartford, Conn.
Columbian Vise & Mfg. Co., The, Cleveland, Ohio
Crane Co., Chicago, Ill.
Grand Specialties Co., Chicago, Ill.
Hollands Mfg. Co., Erie, Pa.
Munton Mfg. Co., Franklin Park, Ill.
Nye Tool & Machine Co., Chicago, Ill.
Peerless Machine Co., Racine, Wis.
Reed Manufacturing Co., Erie, Pa.
Toledo Pipe Threading Machine Co., The, Toledo, Ohio
Trimont Mfg. Co., Div. of Aetna Industrial Corp., Roxbury, Boston, Mass.
Williams, J. H. & Co., Buffalo, N. Y.
Wilton Tool Mfg. Co., Chicago, Ill.

VISES, Pipe, Chain

American Pipe Tool Co., Chicago, Ill.
Armstrong Bros. Tool Co., Chicago, Ill.
Billings & Spencer Co., The, Hartford, Conn.
Hollands Mfg. Co., Erie, Pa.
Nye Tool & Machine Co., Chicago, Ill.
Reed Mfg. Co., Erie, Pa.
Ridge Tool Co., The, Elyria, Ohio
Toledo Pipe Threading Machine Co., The, Toledo, Ohio
Trimont Mfg. Co., Div. of Aetna Industrial Corp., Roxbury, Boston, Mass.
Western Wire Products Co., St. Louis, Mo.
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VISES, Pipe, Clamp Base

(See: "Vises, pipe, tool kit and post")

VISES, Pipe, Combination

American Pipe Tool Co., Chicago, Ill.
American Scale Co., Kansas City, Mo.
Athol Machine & Foundry Co., Athol, Mass.
Columbian Vise & Mfg. Co., The, Cleveland, Ohio
Desmond-Stephan Mfg. Co., Urbana, Ohio
Hollands Mfg. Co., Erie, Pa.
Morgan Vise Co., Chicago, Ill.
Nye Tool Co., Chicago, Ill.
Parker, Charles, Co., The, Meriden, Conn.
Reed Manufacturing Co., Erie, Pa.
Wilton Tool Mfg. Co., Chicago, Ill.

VISES, Quick Action

Armstrong Bros. Tool Co., Chicago, Ill.
American Scale Co., Kansas City, Mo.
Cardinal Machine Co., Glendale, Calif.
Chicago Tool & Engineering Co., Chicago, Ill.
Grand Specialties Co., Chicago, Ill.
Morgan Vise Co., Chicago, Ill.
Production Devices, Inc., Whitehall, N. Y.
Richards-Wilcox Mfg. Co., Aurora, Ill.
Skinner Chuck Co., The, New Britain, Conn.

VISES, Solid Box or Blacksmiths'

Columbian Vise & Mfg. Co., The, Cleveland, Ohio
Fisher & Norris (Eagle Anvile Works), Trenton, N. J.
Reed Manufacturing Co., Erie, Pa.

VISES, Steamfitters'

(Also see: Vises, Bench, or Vise, Machinists)

Parker, Charles, Co., The, Meriden, Conn.
Trimont Mfg. Co., Div. of Aetna Industrial Corp., Roxbury, Boston, Mass.
Wilton Tool Mfg. Co., Chicago, Ill.

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General Electric Co., Schenectady, N. Y.
Glenn-Roberts Co., Oakland, Calif.
Graybar Electric Co., New York, N. Y.
Gulow Corp., New York, N. Y.
Mullenbach Electrical Mfg. Co., Los Angeles, Calif.
Raytheon Mfg. Corp., Waltham, Mass.
Westinghouse Electric Corp., Pittsburgh, Pa.

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Burdett Oxygen Co., The, Cleveland, Ohio
Managanese Steel Forge Co., Philadelphia, Pa.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Standard Steel & Wire Co., Bolivar, Pa.
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Universal Welder Corp., Cleveland, Ohio
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Williams & Co., Inc., Pittsburgh, Pa.

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(See: "Brushes, Weld-Cleaning")

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Harnischfeger Corp., Milwaukee, Wis.
Hebard, W. F., & Co., Chicago, Ill.
Hobart Brothers Co., Troy, Ohio

WELDERS, Arc, A-C

A-C Devices Co., The, Chicago, Ill.
Adler Mfg. Co., Chicago, Ill.
Air Reduction Sales Co., New York, N. Y.
Allen Electric & Equip. Co., Kalamazoo, Mich.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Allmand Bros. Mfg. Co., Holdredge, Nebr.
Alphil Spot Welder Mfg. Co., Brooklyn, N. Y.

(Continued on Page 106)

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WELDERS, Arc, A-C

(Continued from Page 105)

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Electric Arc., Inc., Newark, N. J.
Ergolyte Mfg. Co., Philadelphia, Pa.
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Forney Mfg. Co., Ft. Collins, Colo.
Gaston Power Tools, Chicago, Ill.
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Glenn-Roberts Co., Indianapolis, Ind.
Greyhound A. C. Arc Welder Corp. Brooklyn, N. Y.
Hammett Elec. Mfg. Co., Kansas City, Mo.
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Hercules Elec. & Mfg. Co., Inc., Brooklyn, N. Y.
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Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Kern, John A., Chicago, Ill.
Larkin Lectro Products Co., New York, N. Y.
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Lincoln Electric Co., The, Cleveland, Ohio
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
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Miller Elec. Mfg. Co., Inc., Appleton, Wis.
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Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
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Tri-Arc Corp., Chicago, Ill.
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WELDERS, Arc, D-C

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Allis-Chalmers Mfg. Co., Milwaukee, Wis.
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Couse Mfg., Inc., Newark, N. J.
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General Electric Co., Schenectady, N. Y.
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Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hercules Elec. & Mfg. Co., Inc., Brooklyn, N. Y.
Hobart Bros. Co., Troy, Ohio
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Kern, John A., Co., Chicago, Ill.
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Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
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(Continued on Page 108)

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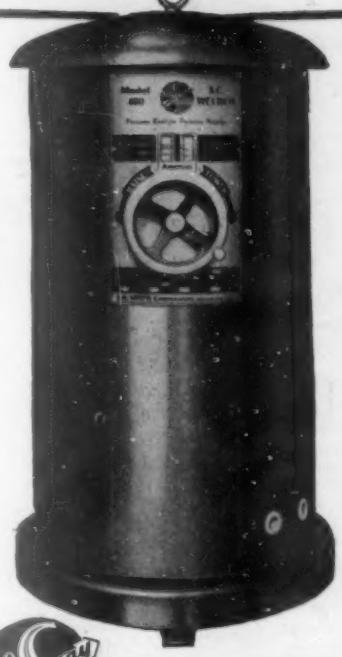

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(Continued from Page 107)

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Westinghouse Elec. Corp., Pittsburgh, Pa.
Wilson Welder & Metals Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

WELDERS, Arc, Combination, AC-DC

Kern, John H., Co., Chicago, Ill.

WELDERS, Arc, Electronic

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Cesco Products, Inc., Chicago, Ill.
Greyhound A.C. Arc Welder Corp., Brooklyn, N. Y.
Kern, John H., Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.

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Aufhauser Bros. Corp., New York, N. Y.
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General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
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Kern, John A., Co., Chicago, Ill.
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Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., Inc., New York, N. Y.

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General Electric Co., Schenectady, N. Y.
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Hobart Brothers Co., Troy, Ohio
Kern, John H., Co., Chicago, Ill.
Mid-States Equip. Corp., Chicago, Ill.
Miller Elec. Mfg. Co., Appleton, Wis.
National Cylinder Gas Co., Chicago, Ill.
Powder Weld Process Co., The, Bklyn, N.Y.
Wilson Welder & Metals Co., Inc., New York, N. Y.

WELDERS, Atomic-Hydrogen

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General Electric Co., Schenectady, N. Y.
Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.
Miller Elec. Mfg. Co., Appleton, Wis.

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Auto Arc Weld Mfg. Co., Cleveland, Ohio
General Electric Co., Schenectady, N. Y.
Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.
Lincoln Electric Co., The, Cleveland, Ohio
Miller Elec. Mfg. Co., Appleton, Wisc.
National Cylinder Gas Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.

WELDERS, Automatic, Submerged Melt

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Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.
Lincoln Electric Co., The, Cleveland, Ohio
Miller Elec. Mfg. Co., Appleton, Wis.
National Machine & Tool Works, Buffalo, N. Y.
Universal Welder Corp., Cleveland, Ohio

WELDERS, Band Saw

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DoAll Co., The, Des Plaines, Ill.
Eisler Engineering Co., Inc., Newark, N. J.
Federal Machine & Welder Co., The, Warren, Ohio
Larkin Lectro Products Co., New York, N. Y.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., Warren, Ohio
Thomson-Electric Welder Co., Lynn, Mass.
Universal Welder Corp., Cleveland, Ohio
Weldit, Inc., Detroit, Mich.
Weldex, Inc., Detroit, Mich.

WELDERS, Bench

Acro Welder Mfg. Co., Milwaukee, Wis.
Agnew Electric Co., Milford, Mich.
Alphil Spot Welder Mfg. Co., Bklyn., N. Y.
American Agile Corp., Cleveland, Ohio
Ames Spot Welder Co., Inc., Brooklyn, N. Y.
Banner Products Co., Milwaukee, Wis.
Central Corp., The, Chicago, Ill.
Eisler Engineering Co., Inc., Newark, N. J.
Ergolyte Mfg. Co., Philadelphia, Pa.
Expert Welding Mach. Co., Detroit, Mich.
Federal Machine & Welder Co., The, Warren, Ohio
Gaston Power Tools, Chicago, Ill.
Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.
Larkin Lectro Products Co., New York, N. Y.
National Electric Welding Machine Co., Bay City, Mich.
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Victor Equipment Co., San Francisco, Calif.
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Welding Machines Mfg. Co., Detroit, Mich.

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Acme Electric Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Milwaukee, Wis.
Agnew Electric Co., Milford, Mich.
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American Elec. Fusion Corp., Chicago, Ill.
Ames Spot Welder Co., Inc., Brooklyn, N. Y.
Banner Products Co., Milwaukee, Wis.
Coddington, E. D., Mfg. Co., Milwaukee, Wis.
DoAll Co., The, Des Plaines, Ill.
Eisler Engineering Co., Inc., Newark, N. J.
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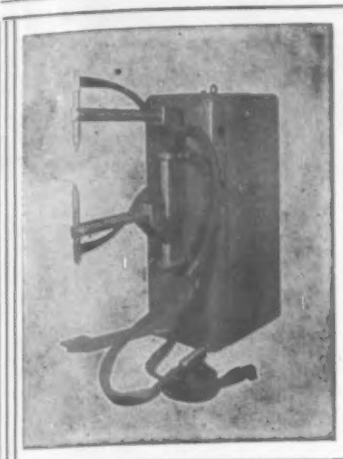

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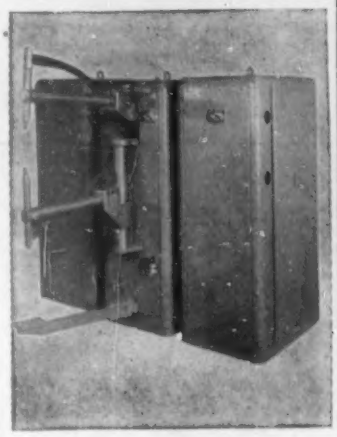

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Resistance Welder Corp., Detroit, Mich.
Rex Welder & Equipment Co., Kansas City, Mo.
Sciaky Bros., Inc., Chicago, Ill.
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Weldit, Inc., Detroit, Mich.
Weldex, Inc., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.

WELDERS, Flash

Acme Elec. Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Milwaukee, Wis.
Agnew Electric Co., Milford, Mich.
Alphil Spot Welder Mfg. Co., Brooklyn, N. Y.
American Elec. Fusion Corp., Chicago, Ill.
Ames Spot Welder Co., Inc., Brooklyn, N. Y.
DoAll Co., The, Des Plaines, Ill.
Expert Welding Mach., Co., Detroit, Mich.
Federal Mach. & Welder Co., Warren, Ohio
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Larkin Lectro Products Co., New York, N. Y.
Micro Products Co., Chicago, Ill.
Multi-Hydromatic Welding & Mfg. Co., East Detroit, Mich.
National Elec. Welding Mach. Co., Bay City, Mich.
Precision Welder and Machine Co., Cincinnati, Ohio
Progressive Welder Co., Detroit, Mich.
Resistance Welder Co., Detroit, Mich.
Rex Welder and Engineering Co., Kansas City, Mo.
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Sperry Products, Inc., Hoboken, N. J.
Stevenson, Jordan & Harrison, New York, N. Y.
Stone-Ryals Electric & Mfg. Co., San Francisco, Calif.
Swift Elec. Welder Co., Detroit, Mich.
Taylor-Winfield Corp., Warren, Ohio
Thomson Electric Welder Co., Lynn, Mass.
Topeka Foundry & Iron Works, Topeka, Kan.
Universal Welder Corp., Cleveland, Ohio
Weldit, Inc., Detroit, Mich.
Weldex, Inc., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.

WELDERS, Gun

Acme Elec. Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Inc., Milwaukee, Wis.
A-C Devices Co., The, Chicago, Ill.
Agnew Electric Co., Milford, Mich.
Banner Products Co., Milwaukee, Wisc.
Central Sales Corp., The, Chicago, Ill.
Chicago Tool & Engrg. Co., Chicago, Ill.
Dalhart Eng. & Mfg. Co., Inc., Van Dyke, Mich.
Eisler Engineering Co., Newark, N. J.
Federal Mach. & Welder Co., Warren, Ohio
Greyhound A.C. Arc Welder Corp., Brooklyn, N. Y.
Larkin Lectro Prod. Corp., New York, N. Y.
Martin Electric Co., Detroit, Mich.
Multi-Hydromatic Welding & Mfg. Co., East Detroit, Mich.
National Electric Welding Machine Co., Bay City, Mich.
Precision Welder & Machine Co., Cincinnati, Ohio
Progressive Welder Co., Detroit, Mich.
Raytheon Mfg. Corp., Waltham, Mass.
Resistance Welder Corp., Detroit, Mich.
Sciaky Bros. Inc., Chicago, Ill.
Sterling Utilities Co., Inc., Brooklyn, N. Y.
Stevens, C. H. & Co., South Norwalk, Conn.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., The, Warren, Ohio
Thomson Electric Welder Co., Lynn, Mass.
Universal Welder Corp., Cleveland, Ohio
Waltcus Mfg. Co., Chicago, Ill.
Weldit, Inc., Detroit, Mich.
Weldex Inc., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.

WELDERS, Inert Gas

(See: "Welders, Arc, Inert Gas Shield")

WELDERS, Pressure, Oxy-Acetylene

Air Reduction Sales Co., New York, N. Y.
Black Mfg. Co., Baltimore, Md.
Greyhound A.C. Arc Welder Corp., Brooklyn, N. Y.
Hamilton Tool Co., The, Hamilton, Ohio
Linde Air Products Co., The, New York, N. Y.
Oxweld Railroad Service Co., The, Chicago, Ill.
Swift Electric Welder Co., Detroit, Mich.
Welders Supply & Mfg. Co., The, Cincinnati, Ohio

WELDERS, Projection

Acme Elec. Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Milwaukee, Wisc.
Agnew Electric Company, Milford, Mich.
Alphil Spot Welder Mfg. Co., Brooklyn, N. Y.
American Elec. Fusion Corp., Chicago, Ill.
Ames Spot Welder Co., Inc., Brooklyn, N. Y.
Dalhart Eng. & Mfg. Co., Van Dyke, Mich.
Eisler Engr. Co., Newark, N. J.
Expert Welding Machine Co., Detroit, Mich.
Federal Mach. & Welder Co., Warren, Ohio
Larkin Lectro Products Co., New York, N. Y.
Martin Electric Co., Detroit, Mich.
Multi-Hydromatic Welding & Mfg. Co., East Detroit, Mich.
National Elec. Welding Mach. Co., Bay City, Mich.
Pier Equipment Mfg. Co., Benton Harbor, Mich.
Powder Weld Process Co., The, Brooklyn, N. Y.
Precision Welder and Machine Co., Cincinnati, Ohio
Progressive Welder Co., Detroit, Mich.
Resistance Welder Corp., Detroit, Mich.
Rex Welder and Engineering Co., Kansas City, Mo.
Sciaky Bros. Inc., Chicago, Ill.
Sterling Utilities Co., Inc., Brooklyn, N. Y.
Stone Ryals Electric & Mfg. Co., San Francisco, Calif.
Swift Elec. Welder Co., Detroit, Mich.
Taylor-Hall Welding Corp., Worcester, Mass.
Taylor-Winfield Corp., The, Warren, Ohio
Thomson Electric Welder Co., Lynn, Mass.
Topeka Foundry & Iron Works. Topeka, Kan.
Universal Welder Corp., Cleveland, Ohio
Weldex, Inc., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.
Weldit, Inc., Detroit, Mich.

WELDERS, Rail

General Electric Co., Schenectady, N. Y.
Guyan Machinery Co., Logan, W. Virginia
Hobart Bros. Co., Troy, Ohio
Larkin Lectro Products, New York, N. Y.
Oxweld Railroad Service Co., The, Chicago, Ill.
Progressive Welder Co., Detroit, Mich.
Resistance Welder Corp., Detroit, Mich.
Sperry Products, Inc., Hoboken, New Jersey
Thomson Electric Welder Co., Lynn, Mass.

WELDERS, Seam

Acme Electric Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Inc., Milwaukee, Wisc.
Agnew Electric Co., Milford, Mich.
Alphil Spot Welder Mfg. Co., Brooklyn, N. Y.
American Electric Fusion Corp., Chicago, Ill.
Ames Spot Welder Co., Inc., Brooklyn, N. Y.
Expert Welding Machine Co., Detroit, Mich.
Federal Mach. & Welder Co., Warren, Ohio
Greyhound A.C. Arc Welder Corp., Brooklyn, N. Y.
Larkin Lectro Products Co., New York, N. Y.
Multi-Hydromatic Welding & Mfg. Co., East Detroit, Mich.
National Elec. Welding Mach. Co., Bay City, Mich.
Peck, Cecil C., Co., Cleveland, Ohio
Penn Tool & Machine Co., Danville, Ill.
Pier Equipment Mfg., Benton Harbor, Mich.
Precision Welder and Machine Co., Cincinnati, Ohio
Progressive Welder Co., Detroit, Mich.
Resistance Welder Corp., Detroit, Mich.
Sciaky Bros. Inc., Chicago, Ill.
Sterling Utilities Co., Brooklyn, N. Y.
Stone-Ryals Electric & Mfg. Co., San Francisco, Calif.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., The, Warren, Ohio
Thomson Electric Welder Co., Lynn, Mass.
Topeka Foundry & Iron Works, Topeka, Kan.
Universal Power Corp., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Victory Engineering & Machine Works, Inc., St. Louis, Mo.
Welder, Inc., Detroit, Mich.
Weldex, Inc., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.

WELDERS, Spot

Acme Elec. Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Milwaukee, Wisc.
A-C Devices Co., The, Chicago, Ill.

(Continued on Page 110)

PRODUCTION UP COSTS DOWN with STERLING WELDERS

5 to 150 KVA
220 V—50/60 cycles

Lower horn adjustable 8 to 20" vertically. Foot pedal adjustable. Water cooled holders. Six secondary voltages available at push button station.

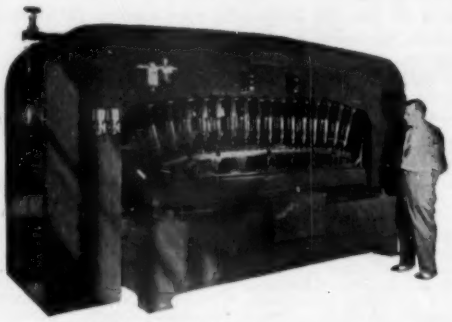
Dealers Wanted

Send for Literature

STERLING UTILITIES CO. INC., MFRS.
74 Sedgwick St. Brooklyn 2, N. Y.

Manufacturers of Resistance Welding Equipment—both Portable and Machine Type

Portable gun unit. We manufacture air and hydraulic types.



Multi-Tip Spot Welder

We manufacture Rocker Arm and Press Type Welders, Special Seam Welders.

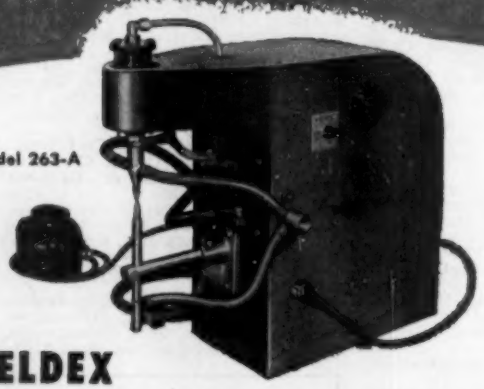
WELDING MACHINES

• Our experienced engineering staff is available for consultation on all resistance welding problems. We would like to work with you on yours.

Manufacturing Company

17332 Lamont Ave. Detroit 12, Mich.

PRODUCTION BOOSTER



Model 263-A

WELDEX

Automatic **Bench-Type Spotwelder**

Speeds up high-quality production spotwelding of light metals. Easy to operate, economical to buy. Straight vertical plunger action—air operated—electronically timed. Rated 3 KVA, handles two thicknesses *18 gauge* C.R.S. or equivalent. Compact, 21" high, 23" deep, 10" wide. Write for Bulletin 200 AB or catalog on complete line from 1 to 7.5 KVA.

DEALERS . . .

Some substantial territories now open. Write for details.

Weldex Inc.

7339 McDONALD DETROIT 10, MICH.

DEALERS!

Cover the LIGHT METAL FIELD!

Weldex now offers a line providing complete coverage of this important market. If you are a substantial dealer in welding equipment, write for bulletins and our proposition.

Model

- **111-RFM** Manually operated (Floor Style) 1 KVA
- **111-PBMT** Manually operated (Bench Style) 1 KVA
- **362-PFM** Manually operated (Floor Style) 3 KVA
- **263-A** Air operated (Bench Style) 3 KVA
- **275-R, 275-P, 275-RS** Manually operated (Floor Style) 7½ KVA
- **752-R, 752-P** Air operated (Floor Style) 7½ KVA

MANUFACTURERS

Investigate this NEW METHOD of light metal fabrication. Ask for bulletins and folder showing accomplishments with Weldex Welders.

WELDERS, Spot

(Continued from Page 109)

Agnew Electric Co., Milford, Mich.
Allen Electric & Equip. Co., Kalamazoo, Mich.
Alphil Spot Welder Mfg. Co., Brooklyn, N. Y.
American Elec. Fusion Corp., Chicago, Ill.
Ames Spot Welder Co., Inc., Brooklyn, N. Y.
Armglo Co., Milwaukee, Wisc.
Banner Products Co., Milwaukee, Wisc.
Birdsell Mfg. Co., Los Altos, Calif.
Burdett Oxygen Co., The, Cleveland, Ohio
Central Sales Corp., The, Chicago, Ill.
Coddington, E. D., Mfg. Co., Milwaukee, Wisc.
Dalhart Eng. & Mfg. Co., Inc., Van Dyke, Mich.
DoAll Co, The, Des Plaines, Ill.
Eisler Engineering Co., Inc., Newark, N. J.
Electric Arc, Inc., Newark, N. J.
Electronic Power Co., Inc., New York, N. Y.
Electric Welding Machine Co., Detroit, Mich.
Expert Welding Machine Co., Detroit, Mich.
Federal Mach. & Welder Co., Warren, Ohio
Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.
Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Hoffman, Robert W., Co., Inc., Chicago, Ill.
Interstate Machinery Co., Chicago, Ill.
Larkin Lectro Products Co., New York, N. Y.
Martin Electric Co., Detroit, Mich.
Metron Instrument Co., Denver, Colo.
Micro Products Co., Chicago, Ill.
Miller Elec. Mfg. Co., Appleton, Wisc.
Multi-Hydromatic Welding & Mfg. Co., East Detroit, Mich.
National Elec. Welding Mach. Co., Bay City, Mich.
Patent Specialties Inc., New York, N. Y.
Pier Equip. Mfg. Co., Benton Harbor, Mich.
Precision Welder and Machine Co., Cincinnati, Ohio
Progressive Welder Co., Detroit, Mich.
Raytheon Mfg. Corp., Waltham, Mass.
Resistance Welder Corp., Detroit, Mich.
Rex Welder and Engineering Co., Kansas City, Mo.
Sciaky Bros. Inc., Chicago, Ill.
Sterling Utilities Co., Brooklyn, N . Y.
Stevenson, Jordan & Harrison, New York, N. Y.
Stone-Ryals Electric & Mfg. Co., San Francisco, Calif.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Hall Welding Corp., Warren, Ohio
Taylor-Winfield Corp., The, Warren, Ohio
Thomson Electric Welder Co., Lynn, Mass.
Tnel Manufacturing Co., Hornell, N. Y.
Topeka Foundry & Iron Works, Topeka, Kan.
Tweezer Welder Corp., Newark, N. J.
Universal Welder Corp., Cleveland, Ohio
Vangtronic Corp., Bridgeport, Conn.
Waitcus Mfg. Co., Chicago, Ill.
Weldit, Inc., Detroit, Mich.
Weldex Inc., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.

WELDERS SPOT (Multiple)

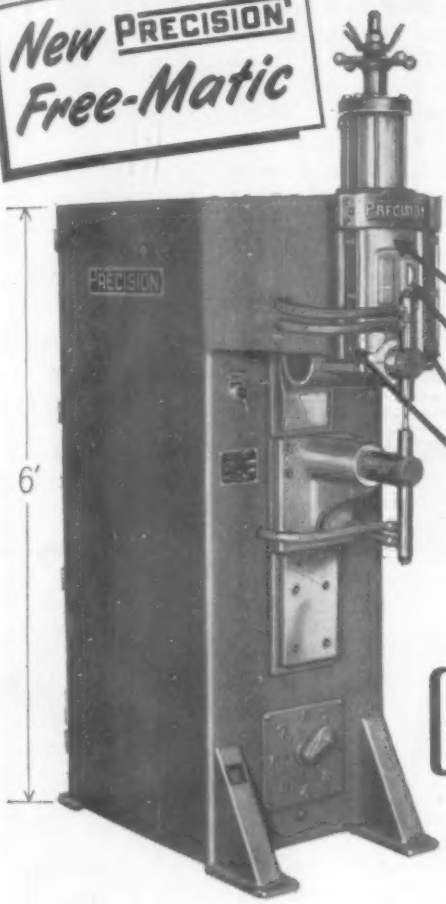
Acme Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Milwaukee, Wis.
Agnew Electric Co., Milford, Mich.
American Electric Fusion Co., Chicago, Ill.
Ames Spot Welder Co., Inc., Brooklyn, N. Y.
Central Sales Corp., The, Chicago, Ill.
Dalhart Eng. & Mfg Co., Inc., Van Dyke, Mich.
Eisler Engineering Co., Inc., Newark, N. J.
Expert Welding Mach. Co., Detroit, Mich.
Federal Machine & Welder Co., The, Warren, Ohio
Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.
Larkin Lectro Prod. Corp., New York, N. Y.
Martin Electric Co., Detroit, Mich.
Metron Instrument Co., Denver, Colo.
Multi-Hydromatic Welding & Mfg. Co., East Detroit, Mich.
National Elec. Welding Mach. Co., Bay City, Mich.
Pier Equip. Mfg. Co., Benton Harbor, Mich.
Precision Welder & Machine Co., Cincinnati, Ohio
Progressive Welder Co., Detroit, Mich.
Rex Welder & Engineering Co., Kansas City, Mo.
Sciaky Bros., Chicago, Ill.

(Continued on Page 112)

Built on the Basis of Current Needs—

A WELDER THAT CAN *Think*

New PRECISION Free-Matic



PRECISIONEERING advanced design gives you a welder that reduces to a minimum the possibility of error resulting from dependency on the always variable human factor. Automatic adjustment, insuring uniformly satisfactory operation, enables you to reduce manufacturing costs.

- Modern Precision Welders are Especially Engineered and Built to machine tool standards.

LOW INERTIA ALUMINUM ALLOY RAM.

FINGER TIP PRESSURE ADJUSTMENT COMBINED WITH AUTOMATIC MICRO SWITCH FIRING.

ANTIFRICTION RAM MOVEMENT COMPLETELY DIVORCED FROM OPERATING CYLINDER

Weld with Precision
SPOT • PROJECTION
SEAM • FLASH • PORTABLE
SPECIAL WELDERS

MICRO SWITCH CONTROL OF SAFETY HEAD AND FIRING PRESSURE.

LOW INERTIA MOVING PARTS.

NEW, FAST, EXCLUSIVE PRECISION *SAFETY HEAD* FEATURE PROTECTS OPERATOR AND WORK. ANY INTERFERENCE WITH NORMAL OPERATION REVERSES STROKE.

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Contact your local Precision welding engineer or the home office.

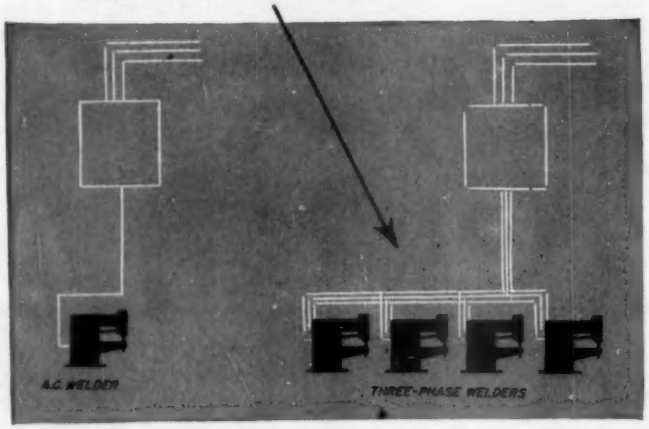
PRECISION WELDER & MACHINE CO.

CINCINNATI 10, OHIO

want to get

4 times as much welder capacity

on your same power distribution facilities?



It's simple . . . install the revolutionary Sciaky "THREE-PHASE" welders! "THREE-PHASE" is an achievement in power efficiency that compensates for the intermittent loads encountered with most resistance welding jobs. It actually allows you to do the same welding job with only ¼ *the current* required by an ordinary AC welder!

Further, you get a *balanced load* on all three phases of your supply. And the power supplier is happy because the machines operate on better than *80% power factor*. You can get Sciaky "THREE-PHASE" welders in big and little sizes—in spot, seam or projection models. Write today for descriptive literature.

Sciaky specializes in the design and manufacture of top quality resistance welders. A complete line of standard machines is available. Our experience is at your disposal for processing complete welding production lines, and for special multiple and gang welders.

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SCIAKY BROS., INC. 4911 W. 67TH ST. CHICAGO 38, ILL.

Offices in New York, Detroit, Buffalo, Dayton—Representatives in principal cities.

IT'S THE NEW, EASY-TO-USE MILLER PORTABLE SPOT WELDER

● Compact—economical to operate—light in weight (23 pounds)—easy on the operator—all these advantages, and more too, will save you money—make you money, on those many hard-to-get-at jobs. Welds up to ⅛" combined thickness. Replaceable tongs and tips. Special tongs and tips for special jobs. Available in 6 models—110 volt or 220 volt A.C. See your jobber today or write

miller
ELECTRIC MANUFACTURING COMPANY
APPLETON, WISCONSIN

WELDERS, SPOT (Multiple)

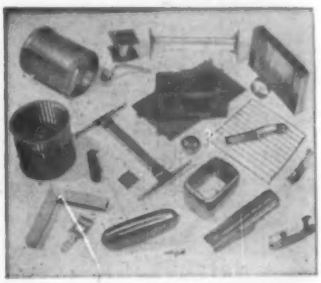
(Continued from Page 110)

Sterling Utilities Co., Inc., Brooklyn, N. Y.
Stone-Ryals Electric & Mfg. Co., San Francisco, Calif.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., The, Warren, Ohio
Universal Welder Corp., Cleveland, Ohio
Welder, Inc., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.
Weldex, Inc., Detroit, Mich.

WELDING COMPOUNDS

(See: "Compounds, Galvanizing," "Compounds, Tinning")

Air Reduction Sales Co., New York, N. Y.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anti-Borax Compound Co., Ft. Wayne, Ind.
Central Steel & Wire Co., Chicago, Ill.
Cortland Welding Compound Co., Cortland, N. Y.
Croton Chemical Corp., New York, N. Y.
Dockson Corp., Detroit, Mich.
Eutectic Welding Alloys Co., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Imperial Brass Co., Chicago, Ill.
Krembs & Co., Chicago, Ill.
Linde Air Products Co., The, New York, N. Y.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metal Bond Mfg. Co., St. Louis, Mo.
Midland Paint & Varnish Co., The, Cleveland, Ohio
Northeast Metals Co., Philadelphia, Pa.
Oxweld Railroad Service Co., The, Chicago, Ill.
Peterson Welding Lab., Kansas City, Mo.
Smith, G. W., & Sons, Inc., Dayton, Ohio
Superior Oxy-Acetylene Mach. Co. Hamilton, Ohio
Universal Power Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Wayne Chemical Products, Detroit, Mich.
Welding Alloys Mfg. Co., Newark, N. J.
York Engineering Co., Chicago, Ill.



Do you make parts like these in job lots?

Then you can cut costs, increase profits and turn out a better job—with relatively *unskilled* labor—by using

VERSATILE *RESISTANCE WELDING* GUNS AND MACHINES

You'll be surprised on how many jobs you can use them and how quickly these PROGRESSIVE ALL-PURPOSE STANDARD projection, spot, seam or flash welders will pay for themselves.

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Every Burdox product provides the latest improvements and offers outstanding quality at prices that mean savings to you in the purchase and in the long run. Sold by all leading welding supply distributors. Send tody for free new catalog.

PORTABLE CYLINDER TRUCKS

"EXTRA-FLEX" WELDING CABLE

PROTECTIVE EQUIPMENT

THE BURDOX LINE INCLUDES

Welding & Cutting Outfits—Welding Rods—Lead Burning Outfits—Soldering & Brazing Outfits—Weld Cleaning Tools—Regulators & Torches—Cutting Machines—Cable—Acetylene Generators—Hose and Hose Connections—Manifolds—Electrode Holders—Cylinder Trucks—Lenses—Fluxes—Gogles—Face Shields—Lighters—Helmets.

THE BURDETT OXYGEN CO.

ESTABLISHED 1923

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You can't beat this Production Team—

Gasweld WELDING EQUIPMENT and SUPPLIES

Write for this Complete Catalog

Since 1932, "Gasweld" Welding Equipment has solved a wide range of problems on production lines. The "Gasweld" Line is complete—includes all welding and Cutting Equipment and Supplies.

- Welding Torches
- Cutting Torches
- Regulators—Oxygen and Acetylene
- Machine Cutting Torches
- Portable Cutting Machines
- Flame Hardening Equipment
- Heating Torches
- Complete Outfits for Welding and Cutting

and **Wall** OXYGEN and ACETYLENE

"Wall" Oxygen and Acetylene gases have long been known for their uniform quality. They come to you in CLEAN cylinders with easy-operating, *gas-tight* valves.

"Service" is a matter of pride to us. You can depend on the superior service we render. Ask any "Wall" customer.

WALL CHEMICALS DIVISION OF

THE LIQUID CARBONIC CORPORATION

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(See also: "Machines, Welding, Gas")

Air Reduction Sales Co., New York, N. Y.
American Oxygen Service Corp., Harrison, N. J.
Burdett Oxygen Co., The, Cleveland, Ohio
Harnischfeger Corp., Milwaukee, Wis.
Haynes Stellite Co., New York, N. Y.
Hollup Corp., Chicago, Ill.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
Oxweld Railroad Service Co., The, Chicago, Ill.
Rail Supply Co., New York, N. Y.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Victor Equipment Co., San Francisco, Calif.
Weldit Inc., Detroit, Mich.

WELDING and CUTTING APPARATUS, Oxygen-Acetylene

Air Reduction Sales Co., New York, N. Y.
American Gas & Chemical Corp., Harrison, N. J.
American Oxygen Service Corp., Harrison, N. J.
Arc Welding Supply Co., Bronx, N. Y.
Arcos Corp., Philadelphia, Pa.
Bastian-Blessing Co., Chicago, Ill.
Black Manufacturing Co., Baltimore, Md.
Buckeye Oxygen Co., Canton, Ohio
Burdett Oxygen Co., Cleveland, Ohio
Cleveland Precision Ring & Products Co., Cleveland, Ohio
Commercial Gas Corp., Wilkes-Barre, Pa.
Craftsweld Equip. Corp., Long Island City, N. Y.
Dockson Corp., Detroit, Mich.
Eagle Welding Equipment Co., Chicago, Ill.
Eutectic Welding Alloys Corp., New York, N. Y.
Gellid Engineering, Oak Park, Ill.
General Welding & Equip. Co., Boston, Mass.
Goss Gas, Inc., Pittsburgh, Pa.
Greyhound A. C. Arc Welder Corp., Brooklyn, N. Y.

(Continued on Page 114)

Dockson **WELDING OUTFITS**

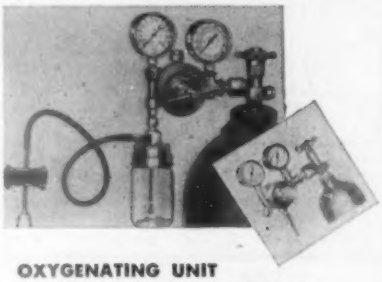
Built for Better Service

Made right—Priced right—Proved right.

DOCKSON CORPORATION

3837 Wabash Detroit 8, Mich.

HOSPITALS GO FOR THESE ITEMS



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OXYGEN THERAPY REGULATOR

The Oxygen Nasal Cannula Unit is equipped with a new, exclusive safety feature. Previously, when the operator forgot to close the regulator on removing the empty cylinder and attaching a new one, the sudden exposure of the regulator to the full 2,000 pounds pressure, severely damaged the diaphragms and liter gauge. With this new safety device, whether the regulator has been left open or closed in changing cylinders, no damage occurs.

OXYGEN NASAL CANNULA UNIT, NO. 219. Adopted to self-administration; eliminates the use of mask. Oxygen is humidified in passing through wash bottle, thereby reducing dryness of nasal musoca.

OXYGEN THERAPY REGULATOR NO. 234 — Illustrated. Junior type (for G, K, D, or E Cylinders). Easily adapted to ambulance installation on emergency inhalator or for any inhalation and resuscitation apparatus. Send for 16-page MEDICAL OXYGEN THERAPY CATALOG.

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MARQUETTE

OXY-ACETYLENE WELDING & CUTTING EQUIPMENT

A Complete Line of Modern, High Quality gas welding equipment. Features: Evenly balanced torch. Mixing Sections of the latest advanced design assures thorough mixture and uniform flow of gasses and perfect combustion with full range of torch tips and pressures. Quick, easy tip alignment. Cutting Assemblies fit torch handle same as tips.

- GAS WELDING RODS
- A Complete Line of Welding and Brazing Fluxes
- SILVER SOLDER and BRAZING ALLOYS
- ALUMINUM SOLDER & BRAZING ALLOYS
- A Complete Line of GOGGLES, LENSES, HOSE and all Welding Accessories.

MARQUETTE *Acetylene Generators*

Save 70% of the cost of cylinder acetylene gas. Produces purer gas for a hotter, more uniform flame. 4 models 12 to 50 lb. capacity.

SOLD EXCLUSIVELY THRU THE NATION'S LEADING DISTRIBUTORS

MARQUETTE

Marquette Mfg. Co., Inc. Minneapolis 14, Minn.

WELDING and CUTTING APPARATUS, Oxygen-Acetylene

(Continued from Page 113)

Hamilton Tool Co., The, Hamilton, Ohio
Harris Calorific Co., The, Cleveland, Ohio
Imperial Brass Manufacturing Co., The, Chicago, Ill.
K-G Welding & Cutting Co., Inc., New York, N. Y.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Manufacturing Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
Nageldinger & Son, Inc., J., New York, N. Y.
National Cylinder Gas Co., Chicago, Ill.
National Welding Equip. Co., San Francisco, Calif.
National Welders Supply Co., Charlotte, N. C.
New England Gas Products, Inc., Charlestown, Mass.
Oxweld Railroad Service Co., Chicago, Ill.
Powder Weld Process Co., The, Brooklyn, N. Y.
Sight Feed Generator Co., The, Richmond, Ind.

(Continued on Page 116)

A USEFUL BOOK FOR THE WELDOR

WELDING—

ITS QUESTIONS And ANSWERS

By T. B. JEFFERSON
Editor, *THE WELDING ENGINEER*

500 QUESTIONS—each answered clearly and understandably in this informative book. Answers the most important everyday questions of every man interested in welding.

Questions were carefully selected and screened from the most frequently asked by weldors about welding, cutting, materials, flame treating, inspecting, etc. Novice and expert alike can get a lot out of this book. It's easy to read, yet contains a fund of information. By using the handy index you can make this book very useful for quick answers to the questions that come up in your daily work.

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- ILLUSTRATED
- INDEXED

$1.50

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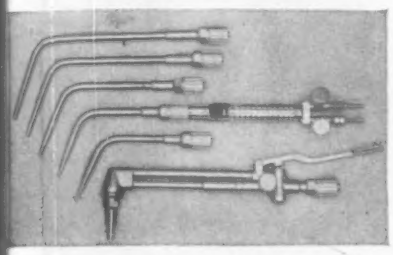
YOUR SUPPLY DEPOT

for oxyacetylene flame and electric arc equipment and supplies

OXYACETYLENE APPARATUS AND SUPPLIES

NEW AIRCO 700 WELDING TORCH. The *new* Airco 700 is suitable for 90% of your welding and brazing work. It is available with tip assemblies ranging from Nos. 00 through 10 . . . with an individual mixer



drilled for each particular tip. This means *better flame control*—there is no sputtering, and better welds result. The *new* "700" also features:

. . . **Wide operating range**—can weld everything from thin sheet metal up to two inch plate, and when equipped with a multi-flame tip, it's tops for silver and aluminum brazing.

. . . **Perfect balance**—lightweight, with $\frac{3}{16}$" I.D. hose, it eliminates operator fatigue.

. . . **Low maintenance cost**—its long-wearing monel head means fewer replacements, and reduced maintenance because rarely is reseating required.

With the addition of a cutting attachment, the *new* "700" can be easily converted to handle general shop cutting work.

For heavier jobs, Airco also has available a new Series 800 Torch which is comparable to the "700" in both appearance and operating characteristics.

These outstanding *new* welding torches are but two of the many included in Airco's complete line of torches for every conceivable gas welding and cutting application.

LOW-COST AIRCO NO. 10 RADIAGRAPH GAS CUTTING MACHINE. The No. 10 Radiagraph is a motor-driven, portable gas cutting machine that cuts in straight lines of any desired length, at speeds from 4" to 50" per minute. It also cuts arcs up to 42½" radius, circles from 3" to 85" in diameter, and bevels up to 40° angle. It weighs only 41 pounds net, and is easily moved from job to job.

Other types and styles of portable machines are also available, as well as a wide variety of stationary types, which operate on the pantograph principle. These machines include the popular Planograph, Oxygraph and Travograph, and are designed to cut straight lines, rectangles, circles and irregular shapes from thinnest steel sheet to thicknesses of 12" or more.

AIRCO TWO-STAGE PRESSURE REGULATORS. These popular regulators for use with oxygen, acetylene, hydrogen, or nitrogen require but one adjustment . . . the first. Once set at the correct operating pressure, they deliver a constant, non-fluctuating flow of gas from start to finish of cylinder discharge. Drops in cylinder pressure are automatically compensated for, thus enabling the operator to devote his full attention and skill to the job at all times.

Airco single-stage regulations are also available for all gas pressure uses.

AIRCO GAS WELDING AND CUTTING SUPPLIES. Airco also produces a complete line of supplies for every phase and stage of gas cutting and welding. Included in the line are: hard-facing alloys, welding rods, fluxes, cylinder trucks, tip cleaning drills, spark-lighters, gloves and goggles.

TECHNICAL SALES SERVICE
—Another Airco Plus-Value for Customers

Airco Technical Sales Service—though not a packaged commodity—is as readily available to all industry as any Airco process or product. If you have a metal working problem, ask to have a Technical Sales Division man call. Write your nearby Airco Office.

ARC WELDING MACHINES, ELECTRODES AND ACCESSORIES

NEW WILSON "HORNET 36A" DC WELDER. The Wilson "Hornet 36A" Arc Welder is the newest member of a famous arc welding machine family. It is a heavy-duty, light-weight machine designed to furnish smooth, steady current for every DC arc welding job — even under severe operating conditions.

The "36A" features simplified control of current output by means of a sturdy hand-wheel mounted on the control cabinet. Close calibration of the current dial eliminates the need for meters. Easy reversal of the polarity of the welding terminals is provided by a sturdy polarity switch. 200, 300 and 400 ampere sizes are available.

Other arc welding machines in the Airco line include the production-proved Wilson "Bumblebee" AC welders, known for their ease of operation and wide work range. These machines feature improved electrical efficiency at rated loads, wide current range, low open circuit voltage (75 volts), vastly improved power factor, quiet operation and minimum maintenance. In fact, there is a Wilson machine for every AC or DC welding purpose.

AIRCO AC/DC ELECTRODES (Including Stainless Steel and Hardfacing Alloys). Time-tried and production-tested, Airco's vast line of electrodes is engineered to supply the right answer for every welding problem. They range from general-purpose, mild-steel electrodes through the new special electrodes for welding "difficult" metals and alloys, and generally are available in both AC and DC types.

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WELDING and CUTTING APPARATUS, Oxygen-Acetylene
(Continued from Page 114)
Smith Welding Equipment Corp., Minneapolis, Minn.
Superior Industrial Gas Corp., Astoria, N. Y.
Torchweld Equipment Co., Chicago, Ill.
Universal Power Corp., Cleveland, Ohio
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Wall Chemicals Division of The Liquid Carbonic Corporation, Chicago, Ill.
Weldit, Inc., Detroit, Mich.
Williams & Co., Inc., Pittsburgh, Pa.

WELDING GLOVES
(See: "Gloves, Asbestos," "Leather," etc.)

WELDING CURTAIN
(See: "Curtains, Asbestos; Fire Resistant Duck; Leather")

WELDING PISTOL, Air-Vibrating
Metallizing Co. of America, Chicago, Ill.
Mid-States Equipment Corp., Chicago, Ill.

WELDING POSITIONS
(See: "Positioners, Welding")

WELDING RODS, Aluminum
Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft, Inc., Indianapolis, Ind.
All State Welding Alloys Co., Inc., White Plains, N. Y.
Aluminum Co. of America, Pittsburgh, Pa.
American Agile Corp., Cleveland, Ohio
American Brass Co., The, Waterbury, Conn.
Arcos Corp., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Atlas Foundry Co., Irvington, N. J.
Burdett Oxygen Co., The, Cleveland, Ohio
Central Steel & Wire Co., Chicago, Ill.
Chicago Hardware Foundry Co., The, North Chicago, Ill.
Ever-Tite Alloys Corp., New York, N. Y.
Eutectic Welding Alloys Co., New York, N.Y.
Hobart Bros. Co., Troy, Ohio
Imperial Brass Mfg. Co., Chicago, Ill.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N.C.
Oxweld Railroad Service Co., The, Chicago, Ill.
Phillips, C. E., & Co., Detroit, Mich.
Southern Oxygen Co., Inc., Washington, D. C.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Standard Electrode & Mfg. Corp., Philadelphia, Pa.
Steel Sales Corp., Chicago, Ill.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
United Wire & Supply Corp., Providence, R. I.
Universal Power Corp., Cleveland, Ohio
U. S. Steel Supply Co., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Welding Alloys Mfg. Co., Newark, N. J.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wooldridge Aluminum Welding Products, Inc., Glastonbury, Conn.
Wow Welding Specialties Co., Chicago, Ill.

WELDING RODS, Aluminum-Bronze
Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft, Inc., Indianapolis, Ind.
American Agile Corp., Cleveland, Ohio
American Brass Co., Waterbury, Conn.
Ampco Metal, Inc., Milwaukee, Wis.
Arcos Corp., Philadelphia, Pa.
Bridgeport Brass Co., Bridgeport, Conn.
Central Steel and Wire Co., Chicago, Ill.
Eutectic Welding Alloys Corp., New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Imperial Brass Mfg. Co., Chicago, Ill.
Linde Air Products Co., The, New York, N. Y.
Marquette Mfg. Co., Minneapolis, Minn.
Mueller Brass Co., Port Huron, Mich.
National Cylinder Gas Co., Chicago, Ill.
Phillips, C. E., & Co., Detroit, Mich.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Victor Equipment Co., San Francisco, Calif.
Williams & Co., Inc., Pittsburgh, Pa.
Wow Welding Specialties Co., Chicago, Ill.

WELDING RODS, Brazing
Aladdin Rod & Flux Mfg. Co., Grand Rapids, Mich.
Allied Weld-Craft, Inc., Indianapolis, Ind.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
Alloy Specialties Co., Swissvale, Pa.
American Agile Corp., Cleveland, Ohio
American Brass Co., The, Waterbury, Conn.
Arc Welding Supply Co., Bronx, N. Y.
(Continued on Page 118)

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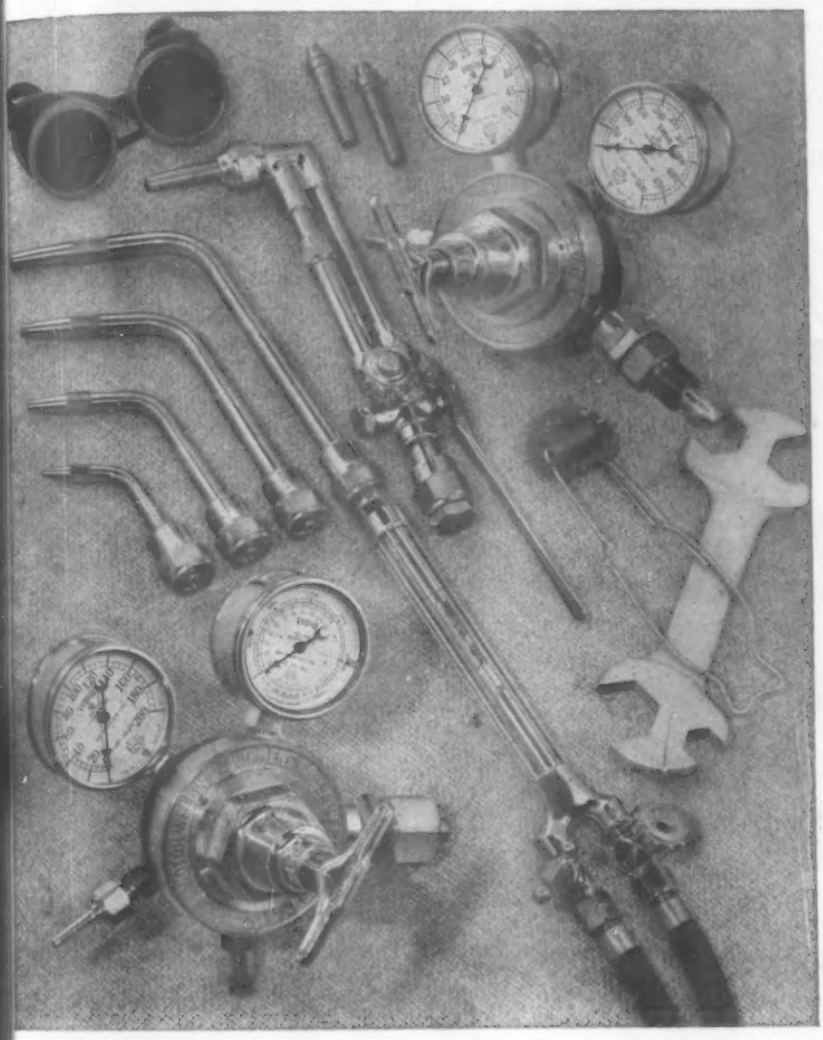

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WELDING RODS, Brazing

(Continued from Page 116)

Bridgeport Brass Co., Bridgeport, Conn.
Burdett Oxygen Co., Cleveland, Ohio
Central Steel and Wire Co., Chicago, Ill.
Chase Brass & Copper Co., Waterbury, Conn.
Eutectic Welding Alloys Corp., New York, N. Y.
Handy & Harman, New York, N. Y.
Hobart Brothers Co., Troy, Ohio
Linde Air Products Co., The New York, N. Y.
Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
McCauley Alloy Sales Co., Chicago, Ill.
McCauley Alloy Co., Steger, Ill.
Metro Mfg. Co., Long Island City, N. Y.
National Welders Supply Co., Charlotte, N. C.
Phillips, C. E., & Co., Detroit, Mich.
Revere Copper & Brass, Inc., New York, N. Y.
Sherman & Co., New York, N. Y.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Steel Sales Corp., Chicago, Ill.
Titan Metal Mfg. Co., Bellefonte, Pa.
United Wire & Supply Corp., Providence, R. I.
Universal Welder Corp., Cleveland, Ohio
Victor Equipment Co., San Francisco, Calif.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wow Welding Specialties Co., Chicago, Ill.

WELDING RODS, Bronze

Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft, Inc., Indianapolis, Ind.
Alloy Rods Co., York, Pa.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Agile Corp., Cleveland, Ohio
American Brass Co., Waterbury, Conn.
American Oxygen Service Corp., Harrison, N. J.
Ampco Metal, Inc., Milwaukee, Wis.
Arcos Corp., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Bridgeport Brass Co., Bridgeport, Conn.
Burdett Oxygen Co., Cleveland, Ohio
Central Steel & Wire Co., Chicago, Ill.
Champion Rivet Co., The, Cleveland, Ohio
Chase Brass & Copper Co., Waterbury, Conn.
Craftsweld Equip. Corp., Long Island City, N. Y.
Davies & Sons, Inc., Los Angeles, Calif.
Eccles & Davies Machinery Co., Inc., Los Angeles, Calif.
Eutectic Welding Alloys Co., New York, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Imperial Brass Mfg. Co., Chicago, Ill.
Johnston, A. P., Los Angeles, Calif.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
McCauley Alloys Sales Co., Chicago, Ill.
McCauley Alloy Co., Steger, Ill.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
Mueller Brass Co., Port Huron, Mich.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
National Welding Equipment Co., San Francisco, Calif.
Oxweld Railroad Service Co., The, Chicago, Ill.
Phillips, C. E., &Co., Detroit, Mich.
Phosphor Bronze Smelting Co., The, Philadelphia, Pa.
Rall Supply Co., New York, N. Y.
Reid Avery Co., Dundalk, Baltimore, Md.
Revere Copper & Brass, Inc., New York, N. Y.
Seymour Mfg. Co., The, Seymour, Conn.
Sight Feed Generator Co., The, Richmond, Ind.
Southern Oxygen Co., Inc., Washington, D. C.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Steel Sales Corp., Chicago, Ill.
Stuart Oxygen Co., San Francisco, Calif.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Titan Metal Mfg. Co., Bellefonte, Pa.
Universal Power Corp., Cleveland, Ohio
U. S. Steel Supply Co., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Welding Alloys Mfg. Co., Newark, N. J.
Weldit, Inc., Detroit, Mich.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

WELDING RODS, Cast-Iron

Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Alloy Rods Co., York, Pa.
All State Welding Alloys Co., White Plains, N. Y.
American Agile Corp., Cleveland, Ohio
American Oxygen Service Corp., Harrison, N. J.
Arc Welding Supply Co., Bronx, N. Y.
Atlas Foundry Co., Cleveland, Ohio
Atlas Foundry Co., Irvington, N. J.
Bierman-Everett Foundry Co., Irvington, N. J.
Burdett Oxygen Co., Cleveland, Ohio
Central Steel & Wire Co., Chicago, Ill.
Chanite Sales Co., Fort Worth, Tex.
Champion Rivet Co., The, Cleveland, Ohio
Chicago Hardware Foundry Co., The, North Chicago, Ill.
Cirod Distributing Co., Lyons, Ill.
Eastern Equipment Co., Willow Grove, Pa.
Ever-Tite Alloys Corp., New York, N. Y.
Eutectic Welding Alloys Co., New York, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Brothers Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Imperial Brass Mfg. Co., Chicago, Ill.
International Nickel Co., Inc., The, New York, N. Y.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
McKay Co., Pittsburgh, Pa.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., The, St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
National Welding Equipment Co., San Francisco, Calif.
North Amer. Philips Co., Inc., New York, N. Y.

(Continued on Page 120)

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FOR REPAIR WELDING

FOR BUILDING UP WORN SURFACES

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ANACONDA WELDING RODS

NAME OF ROD	APPROXIMATE COMPOSITION PER CENT	APPROX. MELT. PT. DEG. C.	DEG. F.	SUGGESTED WELDING METHOD AND USE
ANACONDA COPPER 372 (PATENT NO. 2,220,464)	98.85 Copper	1075	1967	Oxy-acetylene welding of copper.
DEOXIDIZED COPPER 939	99.9 Copper, deoxidizer present	1083	1981	Oxy-acetylene welding of copper.
SILVER BEARING COPPER 110	99 Copper, 1 Silver	1078	1972	Oxy-acetylene welding of copper.
SILICON COPPER 943	99.75 Copper, .25 Silicon	1083	1981	Oxy-acetylene welding of copper, copper to steel.
TOBIN BRONZE* 481	59 Copper, .50 Tin, remainder Zinc	885	1625	Oxy-acetylene welding of steel, cast iron, copper and its alloys, nickel and its alloys.
ECONOMY BRONZE*	Copper, Zinc, Tin	885	1625	Oxy-acetylene welding of steel and cast iron, etc.
ANACONDA 997 (LOW FUMING)	Copper, Zinc, Tin, Iron, Manganese, Silicon	870	1598	Oxy-acetylene welding of steel, cast iron, copper and its alloys, nickel and its alloys. Bearing surfaces.
MANGANESE BRONZE 984	Copper, Zinc, Tin, Iron Manganese	870	1598	Oxy-acetylene welding of steel, cast iron, copper and its alloys, nickel and its alloys.
SUPER-NICKEL 826	70 Copper, 30 Nickel	1225	2237	Oxy-acetylene welding of Cupro-Nickel and steel.
EVERDUR 1010	96 Copper, 3 Silicon, 1 Manganese	1019	1866	Oxy-acetylene and carbon arc welding of Everdur, copper and copper alloys. Special applications to steel.
PHOSPHOR BRONZE 903	95.75 Copper, 4.00 Tin, .25 Phosphorus	1050	1922	Carbon arc welding of phosphor bronze and copper. Special applications to steel.
PHOSPHOR BRONZE 310	89.2 Copper, 10.5 Tin, .3 Phosphorus	1000	1832	Carbon arc welding of phosphor bronze, copper and copper alloys. Bearing surfaces on steel.

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WELDING RODS, Cast-Iron

(Continued from Page 118)

Northeast Metals Co., Philadelphia, Pa.
Oxweld Railroad Service Co., The, Chicago, Ill.
Phillips, C. E., & Co., Detroit, Mich.
Shober Sales, Inc., Stockton, Calif.
Smith, A. O., Corp., Milwaukee, Wis.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Steel Sales Corp., Chicago, Ill.
Williams & Co., Inc., Pittsburgh, Pa.

WELDING RODS, Copper

Air Reduction Sales Co., New York, N. Y.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
Alloy Specialties Co., Swissvale, Pa.
American Agile Corp., Cleveland, Ohio
American Brass Co., Waterbury, Conn.
American Manganese Div., American Brake Shoe Co., Chicago Heights, Ill.
Ampco Metal, Inc., Milwaukee, Wis.
Bridgeport Brass Co., Bridgeport, Conn.
Burdett Oxygen Co., Cleveland, Ohio
Central Steel & Wire Co., Chicago, Ill.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Eutectic Welding Alloys Co., New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
Mueller Brass Co., Port Huron, Mich.
National Cylinder Gas Co., Chicago, Ill.
Perry Equip. Corp., Philadelphia, Pa.
Oxweld Railroad Service Co., The, Chicago, Ill.
Phillips, C. E., & Co., Detroit, Mich.
Revere Copper & Brass, Inc., New York, N. Y.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Steel Sales Corp., Chicago, Ill.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
United Wire & Supply Corp., Providence, R. I.
U. S. Steel Supply Co., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

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Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Alloy Rods Co., York, Pa.
American Agile Corp., Cleveland, Ohio
American Manganese Steel, Div. of American Brake Shoe Co., Chicago Heights, Ill.
Ampco Metal, Inc., Milwaukee, Wis.
Arcos Corp., Philadelphia, Pa.
Armite Laboratories, Los Angeles, Calif.
Bingrod Co., Kalamazoo, Mich.
Burdett Oxygen Co., The, Cleveland, Ohio
Callite Tungsten Corp., Union City, N. J.
Carpenter Steel Co., The, Reading, Pa.
Central Steel & Wire Co., Chicago, Ill.
Champion Rivet Co., The, Cleveland, Ohio
Chicago Hardware Foundry Co., North Chicago, Ill.
Coast Metals, Inc., Canton, Ohio
Crucible Steel Co. of America, Cleveland, Ohio
Delloy Metals, Philadelphia, Pa.
Eaton Mfg. Co., Wilcox-Rich Div., Detroit, Mich.
Ever-Tite Alloys Corp., New York, N. Y.
Eutectic Welding Alloys Co., New York, N. Y.
Fansteel Metallurgical Corp., North Chicago, Ill.
Gorham Tool Co., Detroit, Mich.
Harnischfeger Corp., Milwaukee, Wis.
Haynes Stellite Co., New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Hoskins Bros. Co., Detroit, Mich.
Industrial Overlay Metals, Eaton, Ohio
International Nickel Co., Inc., New York, N. Y.
Kerkling Metals Co., C. A., Hollywood, Calif.
LeTourneau, R. G., Inc., Peoria, Ill.
Lincoln Electric Co., The, Cleveland, Ohio
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
MacDonald Co., Inc., The, Reno, Nev.
McCauley Alloy Sales Co., Chicago, Ill.
McCauley Alloy Co., Steger, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Maurath Inc., Cleveland, Ohio
McDonald Co., E. J., The, Reno, Nev.
McKay Co., The, Pittsburgh, Pa.
Mir-O-Col Alloy Co., Los Angeles, Calif.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
Osage Metal Co., Inc., Oklahoma City, Okla.
Oxweld Railroad Service Co., The, Chicago, Ill.
Phillips, C. E., & Co., Detroit, Mich.
Rankin Mfg. Co., Los Angeles, Calif.
Reid-Avery Co., Dundalk, Baltimore, Md.
Resisto-Loy Co., Grand Rapids, Mich.
Smith, A. O., Corp. Milwaukee, Wis.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Standard Steel & Wire Co., Bolivar, Pa.
Steel Sales Corp., Chicago, Ill.
Stoody Co., Whittier, Calif.
Stulz-Sickles Co., Newark, N. J.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
U. S. Steel Supply Co., Chicago, Ill.
Vascoloy-Ramet Corp., Waukegan, Ill.
Victor Equipment Co., San Francisco, Calif.
Wall Colmonoy Corp., Detroit, Mich.
Westinghouse Elec. Corp., Pittsburgh, Pa.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wilson Welder & Metals Co., Inc., New York, N. Y.

WELDING RODS, High-Tensile

Allied Weld-Craft, Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Alloy Rods Co., York, Pa.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Agile Corp., Cleveland, Ohio
Bridgeport Brass Co., Bridgeport, Conn.
Central Steel and Wire Co., Chicago, Ill.
Champion Rivet Co., The, Cleveland, Ohio
Eutectic Welding Alloys Corp., New York, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Haynes Stellite Co., New York, N. Y.
Hobart Brothers Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
LeTourneau, R. G., Inc., Peoria, Ill.
Marquette Mfg. Co., Minneapolis, Minn.
McKay Co., The, Pittsburgh, Pa.
National Cylinder Gas Co., Chicago, Ill.
North Amer. Philips Co., Inc., New York, N. Y.

Page Steel & Wire Division of American Chain & Cable Co., Inc., Monessen, Pa.
Phillips, C. E., & Co., Detroit, Mich.
Reid-Avery Co., Dundalk, Baltimore Md.
Steel Sales Corp., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Youngstown Sheet & Tube Co., The, Youngstown, Ohio

WELDING RODS, Inconel

Alloy Rods Co., York, Pa.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
Arcos Corp., Philadelphia, Pa.
Eutectic Welding Alloys Co., New York, N. Y.
Hobart Brothers Co., Troy, Ohio
International Nickel Co., Inc., New York, N. Y.
Johnson, A. P., Los Angeles Calif.
Maurath, Inc., Cleveland, Ohio
McKay Co., The, Pittsburgh, Pa.
Modern Engineering Co., Inc., St. Louis, Mo.
Phillips, C. E., & Co., Detroit, Mich.
Reid-Avery Co., Dundalk, Baltimore, Md.
Steel Sales Corp., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

WELDING RODS, Magnesium

Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft Co., Inc., Indianapolis, Ind.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Magnesium Corp., Cleveland, Ohio
Dow Chemical Co., The, Midland, Mich.
Eutectic Welding Alloys Co., New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Marquette Mfg. Co., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
Revere Copper and Brass, Inc., New York, N. Y.
White Metal Rolling & Stamping Corp., Brooklyn, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wow Welding Specialties Co., Chicago, Ill.

WELDING RODS, Manganese

Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft, Inc., Indianapolis, Ind.
Allis-Chalmers Mfg Co., Milwaukee, Wis.
Alloy Rods Co., York, Pa.
American Agile Corp., Cleveland, Ohio
American Brass Co., Waterbury, Conn.
American Manganese Steel, Div. of American Brake Shoe Co., Chicago Heights, Ill.
Central Steel & Wire Co., Chicago, Ill.
Champion Rivet Co., Cleveland, Ohio
Chase Brass & Copper Co., Waterbury, Conn.
Eutectic Welding Alloys Co., New York, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Haynes Stellite Co., New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Industrial Overlay Metals, Eaton, Ohio
Linde Air Products Co., The, New York, N. Y.
Manganese Steel Forge Co., Philadelphia, Pa.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
McKay Co., The, Pittsburgh, Pa.
National Cylinder Gas Co., Chicago, Ill.
Phillips, C. E., & Co., Detroit, Mich.
Ragle, J. M., Industries, Kansas City, Mo.
Reid-Avery Co., Dundalk, Baltimore, Md.
Resisto-Loy Co., Grand Rapids, Mich.
Standard Steel & Wire Co., Bolivar, Pa.
Steel Sales Corp., Chicago, Ill.
Stoody Co., Whittier, Calif.
Stulz-Sickles Co., Newark, N. J.
Taylor Wharton Iron & Steel Co., High Bridge, N. J.
U. S. Steel Supply Co., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Williams & Co., Pittsburgh, Pa.

WELDING RODS, Manganese-Bronze

American Agile Corp., Cleveland, Ohio
American Brass Co., The, Waterbury, Conn.
Arcos Corp., Philadelphia, Pa.
Central Steel and Wire Co., Chicago, Ill.
Chase Brass & Copper Co., Waterbury, Conn.
Eutectic Welding Alloys Corp., New York, N. Y.
Hobart Brothers Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Phillips, C. E., & Co., Detroit, Mich.
Revere Copper & Brass, Inc., New York, N. Y.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Steel Sales Corp., Chicago, Ill.
Stuart Oxygen Co., San Francisco, Calif.
Victor Equipment Co., San Francisco, Calif.
Williams & Co., Inc., Pittsburgh, Pa.

WELDING RODS, Monel

Air Reduction Sales Co., New York, N. Y.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Agile Corp., Cleveland, Ohio
Arcos Corp., Philadelphia, Pa.
Bridgeport Brass Co., Bridgeport, Conn.
Eutectic Welding Alloys Co., New York, N. Y.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
International Nickel Co., Inc., New York, N. Y.
Marquette Mfg. Co., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
Phillips, C. E., & Co., Detroit, Mich.
Reid-Avery Co., Dundalk, Baltimore, Md.
Steel Sales Corp., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Williams & Co., Inc., Pittsburgh, Pa.

WELDING RODS, Nickel

Air Reduction Sales Co., New York, N. Y.
Alloy Rods Co., York, Pa.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Agile Corp., Cleveland, Ohio
American Steel & Wire Co., Cleveland, Ohio
Arcos Corp., Philadelphia, Pa.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Waterbury, Conn.
Crucible Steel Co. of America, New York, N. Y.
Eutectic Welding Alloys Co., New York, N. Y.
Haynes Stellite Co., New York, N. Y.
Hobart Bros Co., Troy, Ohio
Hoskins Mfg. Co., Detroit, Mich.
Industrial Overlay Metals, Eaton, Ohio
International Nickel Co., Inc., New York, N. Y.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., The Wall Chemicals Div., Chicago, Ill.
MacDonald Co., Inc., The, Reno, Nev.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
Page Steel and Wire Div., American Chain & Cable Co., Inc., Monessen, Pa.
Phillips, C. E., & Co., Detroit, Mich.
Southern Oxygen Co., Inc., Washington, D. C.
Standard Steel & Wire Co., Bolivar, Pa.
Steel Sales Corp., Chicago, Ill.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Victor Equipment Co., San Francisco, Calif.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

WELDING RODS, Nickel-Manganese

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
American Agile Corp., Cleveland, Ohio
American Manganese Steel, Div. American Brake Shoe Co., Chicago Heights, Ill.
Arcos Corp., Philadelphia, Pa.
Eutectic Welding Alloys Corp., New York, N. Y.
Harnischfeger Corp., Milwaukee, Wisc.
Hobart Brothers Co., Troy, Ohio
Hoskins Mfg. Co., Detroit, Mich.
Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
Phillips, C. E., & Co., Detroit, Mich.
Resisto-Loy Co., Grand Rapids, Mich.
Steel Sales Corp., Chicago, Ill.
Stulz-Sickles Co., Newark, N. J.
Williams & Co., Inc., Pittsburgh, Pa.

WELDING RODS, Stainless

Air Reduction Sales Co., New York, N. Y.
Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
Allied Weldcraft, Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Alloy Rods Co., York, Pa.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Agile Corp., Cleveland, Ohio
American Manganese Steel, Div. American
American Steel & Wire Co., Cleveland, Ohio
Arcos Corp., Philadelphia, Pa.
Arc Welding Supply Co., Bronx, N. Y.
Bridgeport Brass Co., Bridgeport, Conn.
Burdett Oxygen Co., The, Cleveland, Ohio
Carpenter Steel Co., The, Reading, Pa.
Castle, A. M. & Co., Chicago, Ill.
Central Steel & Wire Co., Chicago, Ill.
Champion Rivet Co., The, Cleveland, Ohio
Chanite Sales Co., Fort Worth, Tex.
Crucible Steel Co. of America, New York, N. Y.

(Continued on Page 122)

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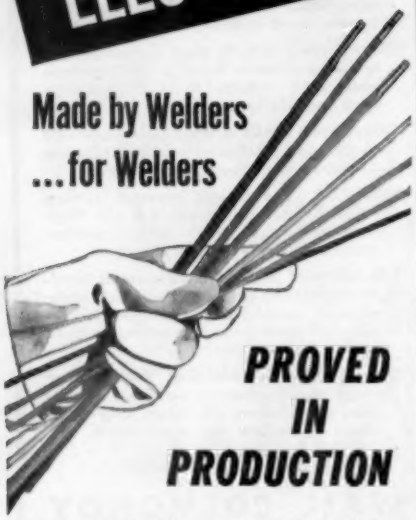

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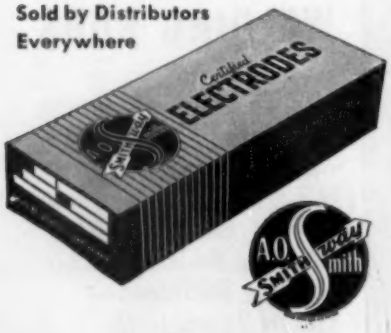

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WELDING RODS, Stainless

(Continued from Page 121)

Eutectic Welding Alloys Co., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Johnston, A. P., Los Angeles, Calif.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Manganese Steel Forge Co., Philadelphia, Pa.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Maurath, Inc., Cleveland, Ohio
McCauley Alloy Sales Co., Chicago, Ill.
McKay Co., Pittsburgh, Pa.
Metro Mfg. Co., Long Island City, N. Y.
Michigan Steel Castings Co., Detroit, Mich.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
Oxweld Railroad Service Co., The, Chicago, Ill.
Page Steel & Wire Div., American Chain & Cable Co., Inc., Monessen, Pa.
Phillips, C. E., & Co., Detroit, Mich.
Reid-Avery Co., Dundalk, Baltimore, Md.
Ryerson, Joseph T., & Son, Inc., Chicago, Ill.
Shober Sales Inc., Stockton, Calif.
Smith, A. O., Corp., Milwaukee, Wis.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Steel Sales Corp., Chicago, Ill.
U. S. Steel Supply Co., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Westinghouse Electric Corp., Pittsburgh, Pa.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.

WELDING RODS, Steel, Mild

Air Reduction Sales Co., New York, N. Y.
Allied Weld-Craft, Inc., Indianapolis, Ind.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
American Agile Corp., Cleveland, Ohio
American Rolling Mill Co., Middletown, Ohio
American Steel & Wire Co., Cleveland, Ohio
Arc Welding Supply Co., Bronx, N. Y.
Bethlehem Steel Co., Bethlehem, Pa.
Borm Manufacturing Co., Elgin, Ill.
Burdett Oxygen Co., The, Cleveland, Ohio
Carlin, Anthony, Co., Cleveland, Ohio
Central Steel & Wire Co., Chicago, Ill.
Champion Rivet Co., Cleveland, Ohio
Chicago Steel & Wire Co., Chicago, Ill.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Eutectic Welding Alloys Co., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Graybar Electric Co., New York, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
LeTourneau, R. G., Inc., Peoria, Ill.
Linde Air Products Co., The, New York, N. Y.
Liquid Carbonic Corp., Wall Chemicals Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
McKay Co., The, Pittsburgh, Pa.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
National Welders Supply Co., Charlotte, N. C.
National Welding Equipment Co., San Francisco, Calif.
North Amer. Philips Co., Inc., New York, N. Y.
Oxweld Railroad Service Co., The, Chicago, Ill.
Page Steel & Wire, Div. American Chain & Cable Co., Inc., Monessen, Pa.
Phillips, C. E., & Co., Detroit, Mich.
Reid-Avery Co., Dundalk, Baltimore, Md.
Shober Sales Inc., Stockton, Calif.
Sight Feed Generator Co., The, Richmond, Ind.
Smith, A. O., Corp., Milwaukee, Wis.
Southern Oxygen Co., Inc., Washington, D. C.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
Standard Steel & Wire Co., Bolivar, Pa.
Steel Sales Corp., Chicago, Ill.
Superior Oxy-Acetylene Mach. Co., Hamilton, Ohio
Trindl Products, Ltd., Chicago, Ill.
Universal Power Corp., Cleveland, Ohio
U. S. Electric Steel Corp., Toledo, Ohio
U. S. Steel Supply Co., Chicago, Ill.

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Welding Equipment & Supply Co., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.
Whitehead Metal Products Co., Inc., New York, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Youngstown Sheet & Tube Co., Youngstown, Ohio

WELDING RODS, Tool & Die

Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
Allied Weldcraft, Inc., Indianapolis, Ind.
Alloy Rods Co., York, Pa.
All State Welding Alloys Co., Inc., White Plains, N. Y.
American Agile Corp., Cleveland, Ohio
American Manganese Steel Div. of American Brake Shoe Co., Chicago Heights, Ill.
Burdett Oxygen Co., The, Cleveland, Ohio
Carpenter Steel Co., The, Reading, Pa.
Central Steel & Wire Co., The, Chicago, Ill.
Champion Rivet Co., The, Cleveland, Ohio
Crucible Steel Co. of America, New York, N. Y.
Eutectic Welding Alloys Co., New York, N. Y.
Ever-Tite Alloys Corp., New York, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Bros. Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Industrial Overlay Metals, Eaton, Ohio
Marquette Mfg. Co., Inc., Minneapolis, Minn.
McKay Co., Pittsburgh, Pa.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
Phillips, C. E. & Co., Detroit, Mich.
Reid-Avery Co., Dundalk, Baltimore, Md.
Resisto-Loy Co., Grand Rapids, Mich.
Smith, A. O., Corp., Milwaukee, Wis.
Steel Sales Corp., Chicago, Ill.
U. S. Steel Supply Co., Chicago, Ill.
Victor Equipment Co., San Francisco, Calif.
Welding Equipment & Supply Co., Detroit, Mich.
Williams & Co., Inc., Pittsburgh, Pa.

WELDING RODS, Tungsten Carbide

American Manganese Steel Div., American Brake Shoe Co., Chicago, Heights, Ill.
Haynes Stellite Co., New York, N. Y.
Stoody Co., Whittier, Calif.
Williams & Co., Inc., Pittsburgh, Pa.

WELDING RODS, White Metal

Air Reduction Sales Co., New York, N. Y.
Aladdin Rod & Flux Mfg. Co., Grand Rapids, Mich.
Allied Weld-Craft, Inc., Indianapolis, Ind.
All State Welding Alloys Co., Inc., White Plains, N. Y.
American Brass Co., The, Waterbury, Conn.
Burdett Oxygen Co., The, Cleveland, Ohio
Central Steel and Wire Co., Chicago, Ill.
Eutectic Welding Alloys Co., New York, N. Y.
Ever-Tite Alloys Corp., New York, N. Y.
Hobart Brothers Co., Troy, Ohio
Hollup Corp., Chicago, Ill.
Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
Modern Engineering Co., Inc., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
Peterson Welding Laboratories, Kansas City, Mo.
Phillips, C. E. & Co., Detroit, Mich.
Ragle, J. M. Industries, Kansas City, Mo.
Southern Oxygen Co., Inc., Washington, D. C.
Special Welding Alloy Co., Inc., Long Island City, N. Y.
United Welding Service Co., Franklin, Pa.
Victor Equipment Co., San Francisco, Calif.
Welding Alloys Mfg. Co., Newark, N. J.
Weldit Inc., Detroit, Mich.
Whitehead Metal Products Co., Inc., New York, N. Y.
White Metal Rolling & Stamping Corp., Brooklyn, N. Y.
Williams & Co., Inc., Pittsburgh, Pa.
Wow Welding Specialties Co., Chicago, Ill.

WELDING FITTING

(See: "Fittings, Pipe, Welding")

WELDING TORCHES, Gas

(See: "Torches, Welding, Gas")

WELD-TIME RECORDERS

A-C Devices Co., Chicago, Ill.
Cramer, R. W. Co., Inc., The, Centerbrook, Conn.
DV Welding Controls, Oakland, Calif.
General Electric Co., Schenectady, N. Y.
Glenn-Roberts Co., Indianapolis, Ind.
Harnischfeger Corp., Milwaukee, Wis.
Hewlett-Packard Co., Palo Alto, Calif.
National Time & Signal Corp., Detroit, Mich.
Rubicon Co., Philadelphia, Pa.
Taylor-Winfield Corp., Warren, Ohio

WHEELS, Grinding

American Emery Wheel Works, Providence, R. I.
Bay State Abrasive Products Co., Westboro, Mass.
Behr-Manning Corp., Troy, N. Y.
Bridgeport Safety Emery Wheel Co., Inc., The, Bridgeport, Conn.
Carborundum Co., The, Niagara Falls, N. Y.
Chicago Wheel & Mfg. Co., Chicago, Ill.
Clover Mfg. Co., Norwalk, Conn.
Cortland Grinding Wheels Corp., Chester, Mass.
de Sanno, A. P., & Son, Inc., Phoenixville, Pa.
Macklin Co., Jackson, Mich.
Mid-West Abrasive Co., Owosso, Mich.
Norton Co., Worcester, Mass.
Peninsular Grinding Wheel Co., The, Detroit, Mich.
Raybestos-Manhattan, Inc., Passaic, N. J.
Simonds Abrasive Co., Philadelphia, Pa.
Simonds Worden White Co., Dayton, Ohio
United States Rubber Co., New York, N. Y.
Universal Wheel & Abrasive Corp., Chicago, Ill.
Weldon Roberts Rubber Co., Newark, N. J.
Wisconsin Abrasive Co., Milwaukee, Wis.

WIRE, Aluminum

Aluminum Co. of America, Pittsburgh, Pa.
Reynolds Metals Co., Louisville, Ky.

WIRE, Metallizing

Allegheny Ludlum Steel Corp., Brackenridge, Pa.
American Manganese Steel Div., American Brake Shoe Co., Chicago Heights, Ill.
Ampco Metal, Inc., Milwaukee, Wis.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Crucible Steel Co., of America, New York, N. Y.
Hoskins Mfg. Co., Detroit, Mich.
Metallizing Co. of America, Chicago, Ill.
Metallizing Engineering Co., Inc., Long Island City, N. Y.
Page Steel & Wire Div., American Chain & Cable Co., Inc., Monessen, Pa.
Reid-Avery Co., Dundalk, Baltimore, Md.
Standard Steel & Wire Co., Bolivar, Pa.
United Wire & Supply Corp., Providence, R. I.
Youngstown Sheet & Tube Co., Youngstown, Ohio

WIRE WELDING

(See: "Rods, Wire, Steel")

WIRE, Automatic Welding

Allied Weld-Craft, Inc., Indianapolis, Ind.
Arcos Corp., Philadelphia, Pa.
Ames Spot Welder Co., Inc., Brooklyn, N. Y.
Aufhauser Bros. Corp., New York, N. Y.
Crucible Steel Co. of America, New York, N. Y.
Linde Air Products Co., The, New York, N. Y.
McKay Co., The, Pittsburgh, Pa.
Metron Instrument Co., Denver, Colo.
National Cylinder Gas Co., Chicago, Ill.
Page Steel & Wire Division of American Chain & Cable Co., Inc., Monessen, Pa.
Phillips, C. E. & Co., Detroit, Mich.
Smith, A. O., Corp., Milwaukee, Wis.
Steel Sales Corp., Chicago, Ill.
Tweezer Weld Corp., Newark, N. J.
Williams & Co., Inc., Pittsburgh, Pa.

WRENCHES, Regulator

American Gas & Chemical Corp., Harrison, N. J.
Blackhawk Mfg. Co., Milwaukee, Wis.
Dockson Corp., Detroit, Mich.
Imperial Brass Mfg. Co., Chicago, Ill.
Liquid Carbonic Corp., The, Wall Chemicals Div., Chicago, Ill.
Metro Mfg. Co., Long Island City, N. Y.
Modern Engineering Co., Inc., St. Louis, Mo.
National Welding Equip. Co., San Francisco, Calif.
Paasche Airbrush Co., Chicago, Ill.
Williams, J. H., & Co., Buffalo, N. Y.

WRENCHES, Torch

American Gas & Chemical Corp., Harrison, N. J.
Liquid Carbonic Corp., The Wall Chemicals Div., Chicago, Ill.
Metro Mfg. Co., Long Island City, N. Y.
Miles, John R. R., Inc., Minneapolis, Minn.
Modern Engineering Co., Inc., St. Louis, Mo.
National Welding Equip. Co., San Francisco, Calif.
Williams, J. H., & Co., Buffalo, N. Y.

X-RAY EQUIPMENT

(See: "Inspection Equipment, X-Ray")

X-RAY AND RADIUM PROTECTION

Bar-Ray Products, Inc., Brooklyn, N. Y.
Canadian Radium & Uranium Corp., New York, N. Y.
Industrial Products Co., Philadelphia, Pa.
Kelley-Koett Mfg. Co., Covington, Ky.
Ray Proof Corp., New York, N. Y.
St. John X-Ray Laboratories, Califon, N. J.

ZINC SHEETS and BARS

American Zinc Products Co., The, Greencastle, Ind.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Consolidated Metals Corp., Detroit, Mich.
Eagle-Picher Sales Co., The, Cincinnati, Ohio
National Lead Co., New York, N. Y.
New Jersey Zinc Co., The, New York, N. Y.
Steel Sales Corp., Chicago, Ill.

TRADE NAME INDEX

OF

WELDING APPARATUS, EQUIPMENT AND SUPPLIES

APPEARS ON FOLLOWING PAGES

FOR COMPLETE ADDRESSES OF MANUFACTURERS

LISTED IN THIS PRODUCTS REFERENCES NUMBER

REFER TO THE

NAME AND ADDRESS SECTION

PAGE 144

TRADE NAME INDEX

An Alphabetical List of Trade Names Employed by Manufacturers of Welding Equipment, Tools and Supplies Whose Products Are Listed in this Buyers' Reference Number, with the Names of the Manufacturers and the Products to Which they Refer.

THE fact that trade names appear in this list does not mean that we guarantee them to be registered or the property of the manufacturers concerned.

WARNING—Therefore, no user of this reference, should, without independent verification, rely upon any information appearing in this section when so doing might result in loss or damage of any kind.—McGraw-Hill Publishing Company, Inc.

In the cases where two or more companies have submitted the same trade name for the same product and there is any question as to the rightful owner of the trade name, we have eliminated it entirely from our list.

Where initials are shown as trade names in this list, they are grouped at the start of the listings under each letter. Where two or more separated words or hyphenated words constitute a trade name, such as "Sure Hold" or "Sure-Hold," the first word standing alone determines the location of the listing, whereas when the two words are used as one, such as "Surehold," the name is listed in order according to the entire word.

Some trade names may have been inadvertently omitted. At the same time, some names you consider to be trade names may not be such, in fact. Therefore, if you cannot locate the name for which you are looking in the "Trade Name Index," look for a similar name in the "Classified List" among the manufacturers shown under the product in which you are interested.

A

A—Flux for cast iron welding. Bierman-Everett Foundry Co., Irvington, N. J.

ABC—Aluminum welding fluxes. Anti-Borax Compound Co., Fort Wayne, Ind.

A-C—Welding electrodes, holder and accessories. Allis-Chalmers Mfg. Co., Milwaukee, Wis.

AC-1—Mild steel, A-C—D-C (AWS E-6011) electrode. Harnischfeger Corp., Milwaukee, Wis.

AC-3—Mild steel, A-C—D-C (AWS E-6013) electrode. Harnischfeger Corp., Milwaukee, Wis.

AC WELD—Welding electrodes. Speer Carbon Co., St. Marys, Pa.

A.E.F.—Spot, butt, seam and tube welders. American Electric Fusion Corp., Chicago, Ill.

AEF Copper—Welding tips for spot welding. American Electric Fusion Corp., Chicago, Ill.

AEF Sealdfit—Hose fittings. American Electric Fusion Corp., Chicago, Ill.

AO—Coats, short jackets, overalls, sleeves, aprons, capes, trousers, spats, legging and gloves. Welding goggles and lenses. American Optical Co., Southbridge, Mass.

AP—Mild steel, reverse polarity (AWS E-6010), electrode. Harnischfeger Corp., Milwaukee, Wis.

APW—Silver brazing alloys. American Platinum Wks., Newark, N. J.

A-R Steel (USS)—Abrasion resisting steel. United States Steel Corporation, Pittsburgh, Pa.

AW-2B—Manganese molybdenum alloy (AWS E-10020) electrode. Harnischfeger Corp., Milwaukee, Wis.

AW-3C—Austenitic stainless (Type 307) electrode. Harnischfeger Corp., Milwaukee, Wis.

AW-4—Chrome-moly low alloy (AWS E-10012) electrode. Harnischfeger Corp., Milwaukee, Wis.

ABRASIVEWAY—Grinding wheels. Simonds Abrasive Co., Philadelphia, Pa.

ABRASCOTE 10—Alloy steel electrode. Harnischfeger Corp., Milwaukee, Wis.

ABRASCOTE 20—Coated austenitic electrode. Harnischfeger Corp., Milwaukee, Wis.

ABRASOWELD—Electrode for building up straight carbon steel, low-alloy or high manganese steel surfaces. Lincoln Electric Co., Cleveland, Ohio.

ABSORBAND—Sweat band. Sellstrom Manufacturing Co., Chicago, Ill.

ACCO—Wire rope sling. Amer. Cable Div. of Amer. Chain & Cable Co., Inc., Wilkes-Barre, Pa.

ACCO LOC—Safety splice for wire rope. Amer. Cable Div. of Amer. Chain & Cable Co., Inc., Wilkes-Barre, Pa.

ACE—Electric spot welders, A-C arc welders and accessories. Pier Equipment Manufacturing Co., Benton Harbor, Mich.

ACHESON—Carbon arc welding electrodes. National Carbon Co., Inc., New York, N. Y.

ACME—Spot welders and resistance welding equipment. Acme Electric Welder Co., Los Angeles, Cal.

ACME—Welding positioners and automatic welding fixtures. Acme Mfg. Co., Detroit, Mich.

ACME HOT SPOT—Spot welders. Acme Electric Welder Co., Los Angeles, Cal.

ACCURATE — Fire extinguishers. Pyrene Manufacturing Co., Newark, N. J.

ACCURATE FREEZING-PROOF CHARGE—Fire extinguisher recharges. Pyrene Manufacturing Co., Newark, N. J.

ACRO—Resistance welding equipment and electric brazing machines. Acro Welder Mfg. Co., Inc., Milwaukee, Wis.

ACROCEL—Safety signs. Acromark Co., Elizabeth, N. J.

ACROMARK—Making machines. The Acromark Co., Elizabeth, N. J.

ACROSTAMP—Steel stamps. The Acromark Co., Elizabeth, N. J.

ACTARC—Coatings for welding electrodes. Actarc Inc., Cleveland, O.

ACTRON—Rectifier tubes and other electronic devices. Allis-Chalmers Mfg. Co., Milwaukee, Wis.

ADALOX—Aluminum oxide coated abrasive. Behr-Manning Corp., Troy, N. Y.

ADAMANT SUPER GENUINE — Babbitt metals. Magnolia Metal Co., Elizabeth, N. J.

ADAMS—Portable gun type spot welder. Central Corp., Chicago, Ill.

ADJUST-A-ANGLE — Welder arm. S-M-S Corp., Detroit, Mich.

ADJUST-A-COLD—Electrode holder. S-M-S Corp., Detroit, Mich.

ADJUST-A-LEG — Equalizing slings. The Caldwell Co., Rockford, Ill.

ADJUST-A-PRESSURE — Holders. S-M-S Corp., Detroit, Mich.

ADLER—Portable acetylene generator. Adler Mfg. Co., Milwaukee, Wis.

ADMIRAL—Power transmission cable. Welding Engineering Corp., Milwaukee, Wis.

ADVANCE—Rotary wire wheel brushes and wire hand scratch brushes. The Manufacturers' Brush Co., Cleveland, O.

AERISWELD—Coated electrode for welding brass, bronze and copper. Lincoln Electric Co., Cleveland, O.

AERO—Equal and low pressure air plane torches. Harris Calorific Co., Cleveland, O.

AEROCARB—Liquid carburizing compound. American Cyanamid Co., New York, N. Y.

AEROCASE — Case hardening compound. American Cyanamid Co., New York, N. Y.

AERODYNE—Fans and blowers. The Jeffrey Manufacturing Co., Columbus, O.

AERO HEAT—Heat treating salts. American Cyanamid Co., New York.

AEROIL—Preheating torches, blow torches and thawing outfits, lead melting furnaces and asphalt heating kettles, compound melting furnaces, spray outfits for chemical cleaners and paint stripping, hot dip cleaning, degreasing, metal finishing and protective coating tanks. Aeroil Products Co., West New York, N. J.

AGITON—Aluminum cleaner. Turco Products, Inc., Los Angeles, Cal.

AGITOR—Cleaning machines for metal parts. Gray-Mills Corp., Evanston, Ill.

AGNEW—Resistance electric welders. Agnew Electric Co., Milford, Mich.

AGRIPPA—Clamps. J. H. Williams & Co., Buffalo, N. Y.

AIR BLASTER—Ventilating fan. Chelsea Fan & Blower Co., Inc., Irvington, N. J.

AIR-FLOW—Air-fed welding helmet. Chicago Eye Shield Co., Chicago, Ill.

AIRADIATOR—Welding torch nozzle. Victor Equipment Co., San Francisco, Cal.

AIRCO—Acetylene, oxygen, nitrogen, argon and other atmospheric gas products, also welding and cutting apparatus, automatic welding and cutting machines, welding rods, electrodes and supplies. Air Reduction Sales Co., New York, N. Y.

AIRCO - DAVIS - BOURNONVILLE (AIRCO - DB)—Welding and cutting torches, regulators, supplies and accessories, acetylene generators, machines for automatic welding and cutting, etc. Air Reduction Sales Co., New York, N. Y.

AIRCO-TWIN—Reinforced hose. Air Reduction Sales Co., New York, N. Y.

AIRCOR—Welders' filters. Air Filter Corp., Milwaukee, Wis.

AIRCRAFT SPECIAL—Motor generator. Hobart Bros. Co., Troy, O.

AIRLITE—Transparent protective garments. Standard Safety Equipment Co., Chicago, Ill.

AIRTRON—Glass cloth rubber impregnated flexible tubing. Arrowhead Rubber Co., Los Angeles, Cal.

AIRTITE—Air and hydraulic vises, valves and cylinders. Production Devices, Inc., Whitehall, N. Y.

AISECO—Safety equipment. Burdett Oxygen Co., Cleveland, O.

AJAX—Induction furnaces. Ajax Electrothermic Corp., Div. Ajax Metal Co., Ajax Park, Trenton, N. J.

AJAX—Electric arc welding machines. Railway Track-work Company, Philadelphia, Pa.

AJAX - NORTHRUP — Induction heating equipment and electric induction furnaces. Ajax Electrothermic Corp., Trenton, N. J.

ALADDIN—Welding rods. Aladdin Rod & Flux Mfg. Co., Grand Rapids, Mich.

ALBOX—Aluminum flux. Canadian Liquid Air Co., Ltd., Montreal, Que., Canada.

ALCOA—Aluminum alloys, welding rods, electrodes, welding and brazing fluxes. Aluminum Company of America, Pittsburgh, Pa.

ALFCO — Fire extinguishers. American LaFrance-Foamite Corp., Elmira, N. Y.

ALFCOSPARY—Nozzles. American LaFrance-Foamite Corp., Elmira, N. Y.

ALFITE—Fire extinguishers and aircraft systems. American LaFrance-Foamite Corp., Elmira, N. Y.

ALFLEX—Flux coated electrodes. Canadian Liquid Air Co., Ltd., Montreal, Que., Canada.

ALFLUX—Aluminum flux. Wooldridge Aluminum Welding Products, Glastonbury, Conn.

ALFLUX No. 1—Aluminum welding flux. Wooldridge Aluminum Welding Products, Inc., Glastonbury, Conn.

ALFLUX No. 2—Aluminum welding flux. Wooldridge Aluminum Welding Products, Inc., Glastonbury, Conn.

ALFLUX No. 3 — Cast aluminum brazing flux. Wooldridge Aluminum Welding Products, Inc., Glastonbury, Conn.

ALFLUX No. 4—Magnesium welding flux. Wooldridge Aluminum Welding Products, Inc., Glastonbury, Conn.

ALFLUX No. 5 — Aluminum brazing flux. Wooldridge Aluminum Welding Products, Inc., Glastonbury, Conn.

ALJAY — Leather welder's clothing. Aljay Mfg. Co., Inc., Philadelphia, Pa.

AL-OX—Aluminum oxide papers and cloths. Clover Manufacturing Co., Norwalk, Conn.

ALL STATE—Low temperature welding and brazing. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 1—Cast iron welding rod. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 2—Cast iron electrode. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 7—Cast iron solder rod. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 4—Electrode for cast iron. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 11—Nickel silver brazing rod. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 13—Hard overlay nickel silver rod. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 21—Phosphor copper brazing rod. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 23—Phosphor copper silver brazing rod. All-State Welding Alloys Co., White Plains, N. Y.

ALL STATE No. 24—Phosphor bronze electrode. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 31—Sheet aluminum brazing rod. All-State Welding Alloy Co., Inc., White Plains, N. Y.

ALL STATE No. 32 — Aluminum electrode. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 33—Cast aluminum brazing rod. All-State Welding Alloys Co., Inc., Inc., White Plains, N. Y.

ALL STATE No. 39—Aluminum solder rod. All-State Welding Alloys Co., Inc. White Plains, N. Y.

ALL STATE No. 41—General purpose brazing rod. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL State No. 45—Brazing compound. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 53—Zinc base die cast. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 61—For magnesium. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 100—Silver brazing. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 101—Silver solder. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 120—Silver solder. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE No. 321—Galvanizing powder. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE SILVER DISPENSER — Silver brazing. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALL STATE FLUXES — Gas rod. All-State Welding Alloys Co., Inc., White Plains, N. Y.

ALLEGHENY — Chromium-nickel stainless and straight chromium alloy steels. Allegheny Ludlum Steel Corp., Brackenridge, Pa.

ALLEGHENY METAL — Chromium - nickel stainless steels. Allegheny Ludlum Steel Corp., Brackenridge, Pa.

ALLEN—A-C transformer type arc welders and combination spot and arc welders. Allen Electric and Equipment Co., Kalamazoo, Mich.

ALLEN—Brazing alloys and rings, wire scratch brushes, fluxes and compounds, solder. L. B. Allen Co., Chicago, Ill.

ALLIS-CHALMERS—Welding electrodes, electrode holder and welding accessories. Allis-Chalmers Mfg. Co., Milwaukee, Wis.

ALLISON—Arc welding electrode holder. Allison Tool and Engineering Co., Los Angeles, Cal.

ALLOY No. 1270—Brazing alloy. Alloy Specialties Co., Swissvale, Pa.

ALLOY No. 1300—Brazing alloy. Alloy Specialties Co., Swissvale, Pa.

ALLOY ROD — Carbon molybdenum arc welding rod. Wilson Welder and Metals Co., Inc., New York, N. Y.

ALLSAFE—Welder's clothing, goggles, helmets and accessories. American Allsafe Co., Buffalo, N. Y.

ALLUMAND—A. C. welding generators, brazing and carbon arc torches, a.c. arc welders and d.c. arc welders. Allumand Bros. Mfg. Co., Holdrege, Neb.

ALMARC — Coated aluminum electrodes. Wooldridge Aluminum Welding Products, Glastonbury, Conn.

ALNICO—Aluminum, nickel and iron alloy. Taylor-Wharton Iron and Steel Co., High Bridge, N. J.

ALOXITE BRAND ALUMINUM OXIDE — Weld grinding wheels. Carborundum Co., Niagara Falls, N. Y.

ALSOD—Solder for aluminum, copper, brass, etc. Wooldridge Aluminum Welding Products, Glastonbury, Conn.

ALTEM—Flux and alloy coated gas welding rods. Canadian Liquid Air Co., Ltd., Montreal, Que., Canada.

ALTERNARC — Alternating current electric welding equipment including transformers, spot, and arc welding equipment, carbon arc equipment, hydrogen flame and polyphase welders, and machines. Electric Arc, Inc., Newark, N. J.

ALTERNEX—Coated arc welding electrode. Metal and Thermit Corp., New York, N. Y.

ALUBRO-WELD—Tinted protective welding lens. Willson Products, Inc., Reading, Pa.

ALUMAWELD—All metal solder and flux, brass and bronze. Johnson Mfg. Co., Inc., Mount Vernon, Iowa.

ALUMEX—50-60, 70—Fire brick and kiln liners. Mexico Refractories Co., Mexico, Mo.

ALUMINUS-NU—Metal cleaner. Nu Steel Co., Chicago, Ill.

ALUMINOX — For cast aluminum welding rods and aluminum flux. Central Steel & Wire Co., Chicago, Ill.

ALUMINOX—Aluminum oxide wheels. American Emery Wheel Works, Providence, R. I.

A-LUM-ITE—Rod for brazing aluminum and welding white metals. United Welding Service Co., Franklin, Pa.

ALUMINWELD—Welding electrode. Lincoln Electric Co., Cleveland, Ohio.

ALUMSIL—Welding cast aluminum silicon rods. Chicago Hardware Foundry Co., North Chicago, Ill.

ALUNDUM — Grinding wheels refractories, aluminum oxide. Norton Co., Worcester, Mass.

A-MAL-GAM—Fluxes. Smith Welding Equipment Corporation, Minneapolis, Minn.

AMBRALOY—Copper aluminum alloys. American Brass Co., Waterbury, Conn.

AMCO—Soldering acids, fluxes and paste. American Solder and Flux Co., Philadelphia, Pa.

AMCOHOOK — Welding helmets. Eastern Equipment Corp., Willow Grove, Pa.

AMCO-GOGGLE—Goggles, welders and clippers. Eastern Equipment Corp., Willow Grove, Pa.

AMCO WELDING FLUX — Welding fluxes, aluminum and aluminum alloys, Monel, nickel base alloys, stainless and heat resisting steel, brass, bronze and coppers as well as cast iron and steels. American Solder and Flux Co., Philadelphia, Pa.

AMCOROD — Oxy-acetylene welding rods. Eastern Equipment Corp., Willow Grove, Pa.

AMCOWELD—Oxy-acetylene and arc welding accessories, safety equipment and clothing. Eastern Equipment Corp., Willow Grove, Pa.

AMERCLAD—Welding cables. American Steel and Wire Co., Cleveland, Ohio.

AMERCLAD—Wire cables. Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

AMERHARD SPECIAL—Welding rod. Eastern Equipment Corp., Willow Grove, Pa.

AMERICAN—Flexible metal hose and tubing. American Oxygen Service Corp., Harrison, N. J.

AMERICAN—Hoist, electric. American Hoist & Derrick Co., St. Paul, Minn.

AMERICAN—Vises, cutters, benders, pipe reamers and die stock sets. American Pipe Tool Co., Chicago, Ill.

AMERROD — Oxy-acetylene rods, bars and flux coated electrodes. Eastern Equipment Corp., Willow Grove, Pa.

AMERTRAN — Electric transformers. American Transformers Co., Newark, N. J.

AMER-WELD — Electric spot welding machines. American Transformer Co., Newark, N. J.

AMES WELDER — Spot and butt welder. Ames Spot Welder Co., Inc., Brooklyn, N. Y.

AMPCO BERYLLIUM-COPPER—Flash welding dies, coated arc welding electrodes and safety tools. Ampco Metal, Inc., Milwaukee, Wis.

AMPCOLOY — Bronze alloys. Ampco Metal Inc., Milwaukee, Wis.

AMPCO METAL — Aluminum bronze alloy. Ampco Metal, Inc., Milwaukee, Wis.

AMPCO-TRODE—Coated aluminum bronze welding rod, carbonic metallic arc welding electrons. Ampco Metal, Inc., Milwaukee, Wis.

AMPCO-TRODE "AC"—Carbon and metallic arc welding electrodes. Ampco Metal, Inc., Milwaukee, Wis.

AMPCO-TRODE 10—Coated aluminum bronze electrode. Ampco Metal, Inc., Milwaukee, Wis.

AMPCO WELD — Resistance welding electrodes. Ampco Metal, Inc., Milwaukee, Wis.

AMSCO DIEWELD—Tool steel welding rods and electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO ECONOMY HARDFACE — Welding rods and electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO FARMFACE—Welding rods and electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO MACHINEFACE—Electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO MANG-CO — Electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO MO-MANG — Electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO NICKEL-MANGANESE — Electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO NICKEL MANGANESE BILLETS — Forgings to order. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO NI-HARD—Welding rods and electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO No. 1—Welding rods and electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO No. 6—Welding rods and electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO No. 217—Welding rods and electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO No. 459—Welding rods and electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO RAILFACE — Electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO RESISTWEAR—Electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO TOOLFACE—Tool steel welding rods and electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO TORCH RAILFACE — Welding rod. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO TUBE TUNGSITE—Welding rod and electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO TUNGROD—Welding rod and electrodes. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO TUNGSITE INSERTS — Tungsten carbide inserts. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO TUNGSITE METAL—Tungsten carbide bulk metal. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO TUNGSITE NUGGETS — Tungsten carbide bulk metal. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO WELDMENTS — Nickel manganese plates. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

AMSCO WEDGE BARS-REPOINTERS—Dipper teeth repointers. American Manganese Steel Div., American Brake Shoe Company, Chicago Heights, Ill.

ANACONDA—Brass products. American Brass Co., Waterbury, Conn.

ANACONDA 997 (Low Fuming) — Bronze welding. American Brass Co., Waterbury, Conn.

ANACONDA ECONOMY BRONZE — Bronze welding. American Brass Co., Waterbury, Conn.

ANACONDA SUPER-NICKEL—Welding rods. American Brass Co., Waterbury, Conn.

ANDERSON—Carbon arc torch. Albert & J. M. Anderson Mfg. Co., Boston, Mass.

ANGLE METER—For pipe and sheet metal layout work. Interstate Sales Co., New York, N. Y.

ANNITE—Alloy welding rod. Bisset Steel Co., Cleveland, Ohio.

ANODE—Welding electrode for use on cast iron. Lincoln Electric Co., Cleveland, Ohio.

ANSUL — Fire extinguishers and chemicals. Ansul Chemical Co., Mannettee, Wis.

ANTI-BORAX—Fluxes for use in welding cast iron, brass, bronze, malleable iron, steel and aluminum, also "ABC" for sheet aluminum, welding and brazing fluxes. Anti-Borax Compound Co., Fort Wayne, Ind.

ANTI-FOG — Compound for safety goggles lens to keep them from fogging. American Optical Co., Southbridge, Mass.

ANTI-FOG "COMP. MCG."—Compounds, anti-fog, lens cleaner. Merix Chemical Co., Chicago, Ill.

ANTI-SPATTER—Chemical coating and anti-spatting compound. Thompson & Co., Oakmont, Pa.

ANTI-SPATTER — Spatter preventative. Wolfe-Kote Co., Inc., Sheboygan, Wis.

ANTIGLARE — Lenses. Chicago Eye Shield Co., Chicago, Ill.

APPLETON—Plugs and receptacles, connectors, pay-out and take-up reels. Appleton Electric Co., Chicago, Ill.

AQUA SOL—Water soluble grinding compound. Wayne Chemical Products Co., Detroit, Mich.

AQUAMAG—Magnesium oxide filler in welding rod coatings. Foote Mineral Co., Philadelphia, Pa.

AQUIFLUX—Soldering flux. Special Chemicals Co., New York, N. Y.

ARC-BAN — Welders' and coverall goggle. Bausch & Lomb Optical Co., Rochester, N. Y.

ARC-BAN—Welding plates for arc welding helmets. Kimball Safety Products Co., Cleveland, Ohio.

ARC-CRAFT ELECTRODES — Electrodes. Allied Weld-Craft, Inc. Indianapolis, Ind.

ARC-FIT—Tube and pipe notching tools. Vogel Tool & Die Corp., Chicago, Ill.

ARC-FLEX—Cable. Arc Welding Supply Co., Bronx, N. Y.

ARC MASTER — Electrode holders. Wagner Manufacturing Co., Inc., Jackson, Mo.

ARC POSITIONER—Positioner. Mark F. Gouran, Philadephia, Pa.

ARC-RITE—Electrode. National Welders Supply Co., Charlotte, N. C.

ARC RITE — A.C. arc welder. Mellaphone Corp., Rochester, N. Y.

ARC TIME TOTALIZER—Instrument recording. Hewlett-Packard Co., Palo Alto, Calif.

ARC-WEL—Cast iron electrodes. Northeast Metals Co., Philadelphia, Pa.

ARC-WELD—Electronics. Arc Welding Co., Bronx, N. Y.

ARCALOY—Stainless steel and heat resisting electrodes. Alloy Rods Co., York, Pa.

ARCALOY — "N", electrodes, nickel. Alloy Rods Co., York, Pa.

ARCAST—Flux coated electrodes. American Arc Welders, Inc., Roseau, Minn.

ARCMASTER—High frequency unit for attachment to any type of A-C arc welder. Welding Apparatus Co., Chicago, Ill.

ARCO WAND—Flux recovery unit. American Vacuum Co., Chicago, Ill.

ARCOS—Special alloy electrodes. Arcos Corp., Philadelphia, Pa.

ARCRONOGRAPH—Graphic instrument for recording uniformity of arc stream. Rubicon Company, Philadelphia, Pa.

ARCTROL—Foot operated variable resistance unit. Mullenbach Electrical Mfg. Co., Los Angeles, Calif.

ARMCO—Stainless steels, spiral welded pipe, zinc grip sheet steel, aluminized sheet steel, galvanized paint grip steel, cold rod paint grip. Armco Steel Corp., Middletown, Ohio.

ARMCO ALUMINIZED STEEL — Aluminum-coated sheet steel. American Rolling Mill Co., Middletown, Ohio.

ARMCO GALVANIZED PAINTGRIP—Galvanized zinc-coated sheet iron or steel. American Rolling Mill Co., Middletown, Ohio.

ARMCO ELECTRICAL STEEL—Silicon alloy steel. American Rolling Mill Co., Middletown, Ohio.

ARMCO ENAMELIN IRON — Refined sheet iron. American Rolling Mill Co., Middletown, Ohio.

ARMCO HIGH STRENGTH STEEL — Low-alloy sheet steel. American Rolling Mill Co., Middletown, Ohio.

ARMCO INGOT IRON—Highly refined iron. American Rolling Mill Co., Middletown, O.

ARMCO LONG TERNES—Iron or steel sheets coated with an alloy of lead and tin. American Rolling Mill Co., Middletown, O.

ARMCO STAINLESS STEEL—Chromium-iron and chromium-nickel iron alloys in sheets, strip, plates. American Rolling Mill Co., Middletown, Ohio.

ARMCO ZINCGRIP—Zinc-coated sheet metal. American Rolling Mill Co., Middletown, O.

ARMCO ZINCGRIP-PAINTGRIP—Zinc-coated sheet metal. American Rolling Mill Co., Middletown, Ohio.

ARMGLO — Resistance welders, automatic timers for resistance welders and resistance welding electrodes. Armglo Co., Milwaukee, Wis.

ARMITE—Hard facing material and welding rods. Armite Laboratories, Los Angeles, Cal.

ARMITE-ELD No. 1—Hard facing rod. Armite Laboratories, Los Angeles, Calif.

ARMITE-ELD No. 6—Hard facing rod. Armite Laboratories, Los Angeles, Calif.

ARMITE-ELD LAYRITE — Hard facing rod. Armite Laboratories, Los Angeles, Calif.

ARMITE-ELD EMCO "J"—Hard facing rod. Armite Laboratories, Los Angeles, Calif

ARMITE-ELD SELF HARDENING—Hard facing rod. Armite Laboratories, Los Angeles, Calif.

ARMORIZE—Electrodes. Crucible Steel Co. of America, New York, N. Y.

ARMSTRONG — Forged steel "C" clamps. Armstrong Bros. Tool Co., Chicago, Ill.

ARO — Lubrication equipment, pneumatic tools and aircraft parts. The Aro Equipment Corp., Bryan, Ohio.

ARROW-BLAST—Abrasive for sand blasting. Norton Co., Worcester, Mass.

ASBESTOS FIREMAN — Safety Clothing. Wheeler Protective Apparel, Inc., Chicago, Ill.

ASCO — Acetylene. Acetylene Service Co., Denver, Colo.

ATCO—Cast iron welding rods. Atlas Foundry Co., Cleveland, Ohio.

ATCO ALLOY No. 7—Cast iron rods for high pressure welding. Atlas Foundry Co., Cleveland, Ohio.

ATCO MOLY-NICKEL—Cast iron alloy welding rods. Atlas Foundry Co., Cleveland, O.

ATLAS—Cast iron welding flux. Air Reduction Sales Co., New York, N. Y.

ATLAS—Weld cleaning tools, brushes, hammers and die stamps. Atlas Welding Accessories Co., Ferndale, Mich.

ATLAS—Torch lighters. Flint Products Co., Brooklyn, N. Y.

ATLAS CLEANING BRUSH — Wire bristle weld cleaning brush. Atlas Welding Accessories Co., Ferndale, Mich.

ATLAS DUAL-CASE — Carrying case of leather. Atlas Welding Accessories Co., Ferndale, Mich.

ATLAS MODEL A DUAL-TOOL — Combination heavy duty chipping hammer and wire bristle brush. Atlas Welding Accessories Co., Ferndale, Mich.

ATLAS MODEL B DUAL-TOOL—Combination chipping hammer and wire bristle brush. Atlas Welding Accessories Co., Ferndale, Mich.

ATLAS SYMBOL HAMMER — Combination weld cleaning hammer with symbol insert for permanent marking. Atlas Welding Accessories Co., Ferndale, Mich.

ATLAS UNIVERSAL TOMAHAWK — Weld cleaning tool. Atlas Welding Accessories Co., Ferndale, Mich.

ATOMIC—Insulated electric holders. Welding Engineering Corp., Milwaukee, Wis.

AUFHAUSER—Machinery used in production of welding electrodes. Aufhauser Bros. Co., New York, N. Y.

AUTO-ARC — Welding head and automatic welding wire. Auto Arc Weld Mfg. Co., Cleveland, Ohio.

AUTOCHEMIC—Fluxes. Eutectic Welding Alloys Corp., New York, N. Y.

AUTOGENIZER—Compound. Lincoln Electric Co., Cleveland, Ohio.

AUTO-LITE — Pressure gauges. Instrument Div., Electric Auto-Lite Co., New York, N. Y.

AUTOMAT—Welding torch. Modern Engineering Co., Inc., St. Louis, Mo.

AUTOMATIC—"Automatic" welding torches. The Harris Calorific Co., Cleveland, Ohio.

AVIATOR—Welding torch. Modern Engineering Co., Inc., St. Louis, Mo.

AZTEX—Fire Brick. Mexico Refractories Co., Mexico, Mo.

B

BB-2—Brass flux. Pittsburgh Metals Purifying Co., Pittsburgh, Pa.

B&B — Safety slings. Broderick & Bascom Rope Co., St. Louis, Mo.

B&H—Welder's gloves, leather jackets, cape sleeves, overalls and pants and other accessories for welders and flame cutting operators. B&H Welders' Supplies, Portsmouth, Va.

B&W—Straight-edge held in place by magnets. B&W Co., Los Angeles, Calif.

BBB—Carbon electrodes, carbon plates and paste, copper coated cored carbon electrodes, carbon brush sets. Becker Bros. Carbon Co., Cicero, Ill.

BADGER — Permanent air filters. Badger Corp., Milwaukee, Wis.

BAFFLE CRETE—For monolithic baffle construction. Mexico Refractories Co., Mexico, Mo.

BALBACH—Dry oxygen and acetylene. The Balbach Co., Omaha, Neb.

BALL-GRIP—Electrode holder. McClary & Byers Equipment Co., Oakland, Calif.

BANNER—Resistance welders. Banner Products Co., Milwaukee, Wis.

BANTAM BULLY—Pneumatic chipping and peening hammer. Superior Mfg. Co., Cleveland, O.

BARGER—Dust collector. Ralph Maitland, Cleveland, O.

BAR LOK—C clamps, vises, pressure units for jigs, fixtures and shielded welding C clamps. Mechanics Engineering Co., Jackson, Mich.

BARTLETT COMPOUND LEVER—Metal cutting shears. Bartlett Manufacturing Co., Detroit, Mich.

BASCO—Welders' clothing, gloves and protective garments. Boston Athletic Shoe Company, Cambridge, Mass.

BAYFLEX—Cut-off wheels, also discs. Bay State Abrasive Prod. Co., Westboro, Mass.

BAY STATE — Grinding wheels, lapping stones, polishing wheels and abrasive bricks. Bay State Abrasive Products Co., Westboro, Mass.

BECKER BROS. — Replacement carbon brushes. Becker Bros. Carbon Co., Cicero, Ill.

BEFCO—Cast iron, cast aluminum and cast manganese bronze welding rods. Bierman-Everett Foundry Co., Irvington, N. J.

BELDEN—Welding cable and power supply cable. Belden Mfg. Co., Chicago, Ill.

BELL TOP—Torch lighters. Flint Products Co., Brooklyn, N. Y.

BELMONT—Metals. Belmont Smelting Refining Works, Inc., Brooklyn, N. Y.

BERGSTROM—Alloy hard-facing electrodes. Bergstrom Alloys Corp., Reno, Nev.

BERGSTROM FABRILOY — Electrodes. Industrial Overlay Metals, Eaton, O.

BERGSTROM FLEXALOY — Hardsurfacing welding rods. Industrial Overlay Metals, Inc., Eaton, O.

BERGSTROM MANGALOY — Hardsurfacing welding rods. Industrial Overlay Metals, Inc., Eaton, O.

BERGSTROM MANGALOY RX—Hardsurfacing welding rods. Industrial Overlay Metals, Inc., Eaton, O.

BERGSTROM SUPRALOY — Hardsurfacing welding rods. Industrial Overlay Metals, Inc., Eaton, O.

BERGSTROM TRAKALOY — Hardsurfacing welding rods. Industrial Overlay Metals, Inc., Eaton, O.

BERGSTROM TRAKALOY RX—Hardsurfacing welding rods. Industrial Overlay Metals, Inc., Eaton, O.

BERGSTROM TYPE A—Hardsurfacing welding rods. Industrial Overlay Metals, Inc., Eaton, O.

BERGSTROM TYPE B—Hardsurfacing welding rods. Industrial Overlay Metals, Inc., Eaton, O.

BERGSTROM TYPE C—Hardsurfacing welding rods. Industrial Overlay Metals, Inc., Eaton, O.

BERGSTROM TYPE S—Hardsurfacing welding rods. Industrial Overlay Metals, Inc., Eaton, O.

BERKELEY—Continuous longitudinal seam welder. Penn Tool & Machine Co., Danville, Ill.

BERYL-TRODE—Copper-base alloy electrode. Ampco Metals, Inc., Milwaukee, Wis.

BESCO—Spot welder. Tweezer Weld Corp., Newark, N. J.

BEST—Water hardening tool steel. Henry Disston & Sons, Inc., Tacony, Philadelphia, Pa.

BEST YET — Coated cover lens. Sellstrom Mfg. Co., Chicago, Ill.

BETTERWELD — Cast iron welding flux. Victor Equipment Co., San Francisco, Cal.

BIG AMP—Cable connectors. Plastal Manufacturing Co., Pasadena, Cal.

BIG BRUTE—Welding ground clamp. Mueller Electric Co., Cleveland, O.

BIG THREE—Oxy-acetylene and electric arc welding equipment, welding rods, electrodes, and accessories, and oxygen and acetylene. Big Three Welding Equipment Co., Fort Worth, Tex.

BINGO—Soldering tip. Beaverdell Co., Chicago, Ill.

BINGROD—Hard-facing rod. Bingrod Co., Kalamazoo, Mich.

BIRDSELL PRODUCTS—A.C. arc and spot welders; carbon arc torches. Birdsell Manufacturing Co., Los Altos, Cal.

BISCO — Electric-arc welding rods. Bissett Steel Co., Cleveland, O.

BLACK & DECKER—Portable electric tools. Black & Decker Mfg. Co., Towson, Md.

BLACK ARROW—Oxy-acetylene welding and cutting equipment and accessories. The Black Mfg. Co., Baltimore, Md.

BLACK DEVIL—Flux coated welding electrodes. The Champion Rivet Co., Cleveland, O.

BLACK DEVIL 75—Welding electrodes. The Champion Rivet Co., Cleveland, O.

BLACK MAGIC—Hard-facing flux. Universal Welder Corp., Cleveland, O.

BLASTFOE — Sand blasting helmets and masks. Mine Safety Appliance Co., Pittsburgh, Pa.

BLINKER—Helmet. Welding Apparatus Co., Chicago, Ill.

BLOFLEX—Ventilating hose. American Ventilating Hose Co., New York, N. Y.

BLU-FLEX—Hack saw blades. Millers Falls Co., Greenfield, Mass.

BLU-MOL—Hack saw blades. Millers Falls Co., Greenfield, Mass.

BLUE BOY — Differential hoist. Chisholm-Moore Hoist Corp., Tonowanda, N. Y.

BLUE CENTER—Wire rope. John A. Roebling's Sons Co., Trenton, N. J.

BLUE CHIP—Firth-Sterling Steel Co., McKeesport, Pa.

BLUE DEVIL — Flux coated welding electrodes. The Champion Rivet Co., Cleveland, O.

BLUE DEVIL 85—Heavy flux coated electrodes. The Champion Rivet Co., Cleveland, O.

BLUE FLASH—Torches and regulators. Arc Welding Supply Co., Bronx, N. Y.

BLUE ROD No. 40—Cast iron welding electrodes. Marquette Mfg. Co., Minneapolis, Minn.

BLUE STAR—Knives. E. C. Atkins & Co., Indianapolis, Ind.

BLUE STRIPE—Silicon carbide papers and cloths. Clover Manufacturing Co., Norwalk, Conn.

BLUE TIP — Bronze welding rods. Mueller Brass Co., Port Huron, Mich.

BLUEDAC — Heavy, flux coated electrodes. The Champion Rivet Co., Cleveland, O.

BLUKOTE—A coated electrode. Central Steel and Wire Co., Chicago, Ill.

BODY-GARD — Welding helmets. Burdett Oxygen Co., Cleveland, O.

BOKERWELD—Stainless steel and special alloy arc welding electrodes. H. Boker & Co., Inc., New York, N. Y.

BONNEY—Drop forged welding flanges. Bonney Forge and Tool Works, Allentown, Pa.

BORAX-ETTE—Flux for forge welding. Cortland Welding Compound Co., Cortland, N. Y.

BORCOTE—Organic filler for welding. Foote Mineral Co., Philadelphia, Pa.

BORIUM INSERTS — Tungsten carbide. Stoody Co., Whittier, Cal.

BORIUM NOZZLES—Tungsten carbide liner for sand blasting equipment. Stoody Co., Whittier, Cal.

BOROBLAST — Pressure blasting abrasive. Simonds Abrasive Co., Philadelphia, Pa.

BOROD—Fabricated rod. Stoody Co., Whittier, Cal.

BOROLON—Grinding wheels. Simonds Abrasive Co., Philadelphia, Pa.

BOWERS—Welding helmets and face shields, electrode holders. The Fibre-Metal Products Co., Chester, Pa.

BRAKE SHOE—Air compressors, spray guns and paint spray equipment. Kellogg Div. of American Brake Shoe Co., Rochester, N. Y.

BRAZ-CAST—Flux for bronze welding. Anti-Borax Compound Co., Fort Wayne, Ind.

BRAZ-WELD — Self fluxing brazing rods. Krembs & Co., Chicago, Ill.

BRAZALL—Brazing flux. F. R. Faulk, Pittsburgh, Pa.

BRAZARC—Coated bronze arc welding electrode. Universal Welding Corp., Cleveland, Ohio.

BRAZEWELL—Flux used for bronze welding. Canadian Liquid Air Co., Ltd., Montreal, Que., Canada.

BRAZO FLUX—Flux for bronze-welding and brazing. The Linde Air Products Co., New York, N. Y.

BRAZOX—Soft brass brazing wire. Central Steel & Wire Co., Chicago, Ill.

BRIDGEPORT — Bronze welding alloys. Bridgeport Brass Co., Bridgeport, Conn.

BRIGGS—Air operated, portable, automatic spotwelder. Briggs Mfg. Co., Detroit, Mich.

BRIGHT 110G—High carbon steel welding rod. Central Steel and Wire Co., Chicago, Ill.

BRIGHT BOY—Soft rubber abrasive implements. Weldon Roberts Rubber Co., Newark, N. J.

BRIGHTBOY No. 88—Tablet which consists of a light abrasive incorporated in soft rubber. Weldon Roberts Rubber Co., Newark, N. J.

BROMITE—Aircraft systems. American-La-France-Foamite Corp., Elmira, N. Y.

BRONZ-ARC—Welding electrode. American Arc Welders, Inc., Roseau, Minn.

BRONZEND — Phosphor welding electrodes. Arcos Corp., Philadelphia, Pa.

BRONZE-ROD No. 61—Bronze welding electrode. Marquette Mfg. Co., Minneapolis, Minn.

BRONZEND—Bronze-alloy electrodes. Arcos Corp., Philadelphia, Pa.

BRONZKOTE—Flux coated bronze rod. Central Steel and Wire Co., Chicago, Ill.

BRONZOCHROM—Welding rods and fluxes. Eutectic Welding Alloys Corp., New York.

BRONZOX M—Bronze gas welding rod. Central Steel & Wire Co., Chicago, Ill.

BRYANT—Impact hammer. Bryant Products Distributing Co., Jackson, Mich.

BUCKAGE — Grinders, buffers, drills, etc. Buckeye Tools Corp., Dayton, O.

BUCKEYE—Oxygen, acetylene, and welding and cutting equipment. Buckeye Oxygen Co., Canton, Ohio.

BUCKEYE — Grinders, buffers, drills, etc. Buckeye Tools Corp., Dayton, O.

BUDGIT—Electric hoists, chain blocks, coro reels, trolleys and crane assemblies. Manning, Maxwell & Moore, Inc., Muskegon, Mich.

BUFFALO—Bravers, exhausters, fans, benders, shears, etc. Buffalo Forge Co., Buffalo, N. Y.

BULL DOG—Welding hose. Boston Woven Hose & Rubber Co., Cambridge, Mass.

BULL DOG—Metal electric holder. Welding Engineering Corp., Milwaukee, Wis.

BULLARD—Respirator. E. D. Bullard Co., San Francisco, Cal.

BULLS-EYE — Welding gloves. Universal Leather Co., Berlin, Wis.

BULLOCK—Motors, generators and electrical apparatus. Allis-Chalmers Mfg. Co., Milwaukee, Wis.

BUMBLE BEE—A-C welder. Wilson Welder and Metals Co., Inc., New York, N. Y.

BUNDYWELD—Steel tubing, monel tubing, and nickel tubing. Bundy Tubing Co., Detroit, Mich.

BURDOX—Welding cable. Burdett Oxygen Company, Cleveland, O.

BURT-WELD—Welding lens. B. F. McDonald Co., Los Angeles, Cal.

BUTT ON SPOT—Butt welding attachment. Robert W. Hoffman Co., Inc., Chicago, Ill.

C

C-30 — Machineable-flame hardening. The Champion Rivet Co., Cleveland, O.

CCC METAL—Welding tips for spot welding machines. American Electric Fusion Corp., Chicago, Ill.

CCOCO—Oxygen and acetylene gases compressed in cylinders. Corpus Christi Oxygen Co., Corpus Christi, Texas.

C-F—Welding positioners. Cullen-Friestedt Co., Chicago, Ill.

C-H—Magnetic and electronic timers, contactors and accessories. Cutler-Hammer, Inc., Milwaukee, Wis.

C-L—Chipping and slag removal hammers, and first aid kits. Carter-Lockard Co., Los Angeles, Cal.

C&L—Blow torch and air pots. Clayton & Lambert Mfg. Co. Louisville, Ky.

CM — Ratchet lever hoist. Chisholm-Moore Hoist Corp., Tonowanda, N. Y.

CM—Fire retardant. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

CM-50—Alloy electrode. Harnischfeger Corp., Milwaukee, Wis.

CMD—Chipping hammers and "C" clamps. Chicago Mfrs. & Distributing Co., Chicago, Ill.

CP — Pneumatic tools. Chicago Pneumatic Tool Co., New York, N. Y.

CP-12 — Babbitt metals. Magnolia Metal Co., Elizabeth, N. J.

C-T—Tungsten electrode. Callite Tungsten Corp., Union City, N. J.

CABLE KING—Electric hoist. The Yale & Towne Mfg. Co., Philadelphia, Pa.

CABLE-TITE—Cable connector and welding locks. Hollup Corp., Chicago, Ill.

CALGRAIN—Granular marble. Foote Mineral Co., Philadelphia, Pa.

CALOBAR—Glass for goggles and welding helmets. American Optical Co., Southbridge, Mass.

CALTRON — Training aids, magnetic tape recorders, phonograph pickups. Caltron Co., Los Angeles, Cal.

CALTROL—Airline, solenoid, check, flow and valves. Caltron Co., Los Angeles, Cal.

CAMOGRAPH — Oxy-acetylene cutting machine. Air Reduction Sales Co., New York, N. Y.

CAMPBELL—Abrasive cutting machines. Andrew C. Campbell Div. of American Chain & Cable Co., Inc., Bridgeport, Conn.

CANADIAN — Calcium carbide. Shawinigan Products Corporation, New York, N. Y.

CANDEE-SMITH—Governors for gas engine driven electric welders. Candee's Machine Shop, Los Angeles, Cal.

CANDOR — Welders' leather work gloves. Candor Glove Co., Candor, N. Y.

CANEDY OTTO — Radial drills and drill presses. Canedy Otto Mfg. Co., Chicago Heights, Ill.

CAPUTO-CRAWFORD—Kinetic stored energy system for resistance welding. Progressive Welder Co., Detroit, Mich.

CARBIC — Calcium carbide used in flare lamps, floodlights and portable acetylene generators for oxy-acetylene welding and cutting. The Linde Air Products Co., New York, N. Y.

CARBO — Oxygen, carbo-hydrogen, welding and cutting equipment, welding supplies and accessories. National Cylinder Gas Co., Chicago, Ill.

CARBO—Baked carbons. Hobart Brothers Co., Troy, Ohio.

CARBOLITE — Calcium carbide. The Linde Air Products Co., New York, N. Y.

CARBOLITE—Silicon carbide wheels. American Emery Wheel Works, Providence, R. I.

CARBOLOY—Cemented carbide composition used for tipping cutting tools and other products. Carboloy Co., Inc., Detroit, Mich.

CARBON-FREE LIQUIDIZERS—Pipe eliminators for castings and ingots. Pittsburgh Metal Purifying Co., Pittsburgh, Pa.

CARBON-MOLY 50—Electrode. Metal & Thermit Corp., New York, N. Y.

CARBON PUTTY—Carbon compound. Smith Welding Equipment Corporation, Minneapolis, Minn.

CARBORA — Grinding wheels and abrasive products. Cortland Grinding Wheels Corp., Chester, Mass.

CARBORUNDUM BRAND SILICON CARBIDE—Grinding wheels. Carborundum Co., Niagara Falls, N. Y.

CARBURS — Carbide Rotary Files. Lincoln Park Ind., Inc., Lincoln, Mich.

CAREND — A-C welding electrode. Arcos Corp., Philadelphia, Pa.

CARHOFF — Electrode holder. Carhoff Co., Cleveland, O.

CARILLOY (USS)—Alloy steels. Carnegie-Illinois Steel Corp., Pittsburgh, Pa.

CARPENTER — Stainless steel bars, strip, dril lrod, welded tubing, welding rods, tool steel, alloy steel, etc. Carpenter Steel Co., Reading, Pa.

CASCADE—Liquid oxygen. The Linde Air Products Co., New York, N. Y.

CASCO — Liquid and paste flux. Flux-All Chemical Products, New York, N. Y.

CASH-ACME—Regulators and valves. A. W. Cash Valve Manufacturing Corp., Decatur, Ill.

CASTINGWELD — A-C or D-C electrode. Westinghouse Electric Corp., E. Pittsburgh, Pa.

CASTIRONARC — Arc welding electrodes. Universal Welding Corp., Cleveland, O.

CASTOLIN — Alloys and fluxes. Eutectic Welding Alloys Corp., New York, N. Y.

CASTOX — Welding rod and flux. Central Steel & Wire Co., Chicago, Ill.

CAST-ROD No. 42 — Electrode. Marquette Mfg. Co., Minneapolis, Minn.

CASTWELD—Rod. Steel Sales Corp., Chicago, Ill.

CELL CRETE—Castable refractory. Mexico Refractories Co., Mexico, Mo.

CERFAK LIQUID—Metal cleaners and detergents. F. F. Houghton & Co., Philadelphia, Pa.

CENTER-FINDER—For pipe and sheet metal layout work. Interstate Sales Co., New York, N. Y.

CERTAIN CURTAIN—Electric furnaces for stress relieving operations. C. I. Hayes, Inc., Providence, R. I.

CERTIFIED STAINLESS ELECTRODES — Stainless steel electrodes. McKay Co., Pittsburgh, Pa.

CESCO — Goggles, helmets, hand shields, masks, etc. Chicago Eye Shield Co., Chicago, Ill.

CESCOWELD—Glass for lenses and in plate form for welding goggles and helmets for oxy-acetylene and electric welding. Chicago Eye Shield Co., Chicago, Ill.

CHAIN - O - FLEX — Conveyor. Industrial Equipment Co., Chicago, Ill.

CHALLENGE—Lapping plates, layout surface plates, bench plates, work benches, surfaces plate, straight edges, solid parallels, box parallels, angle plates, V-blocks and abrasive cut-off machines. Challenge Machinery Co., Grand Haven, Mich.

CHAMBERS—Helmet goggles for oxy-acetylene welding and cutting. Carter-Lockard Co., Los Angeles, Cal.

CHAMPION — Air compressors. Champion Pneumatic Mach. Co., Chicago, Ill.

CHAMPION — Electrodes. The Champion Rivet Company, Cleveland, O.

CHAMPION—Pneumatic tools. The Dallet Co., Philadelphia, Pa.

CHAMPION — Pneumatic tools. The Dallet Co., Philadelphia, Pa.

CHAMPION—Pipe vise stand. Nye Tool Co., Chicago, Ill.

CHAMPION—Welding goggles, lens. Burdett Oxygen Co., Cleveland, O.

CHAMPION AIRCRAFT—Electrodes for air craft welding. The Champion Rivet Co., Cleveland, O.

CHANITE ELECTRIC HEATING ELEMENT FLUX—Heating element repair. Chanite Sales Co., Fort Worth, Tex.

CHANNELLOCK—Pliers. Champion De Arment Tool Co., Meadville, Pa.
CHASE—Brass, bronze, and copper products. Chase Brass & Copper Co., Inc., Waterbury, Conn.
CHEK-SHOCK—Cushion for protecting regulators and valves on oxygen, hydrogen and other high pressure gas systems. Check-Shock Mfg. Co., Fowler, Cal.
CHELSEA — Ventilating fans and blowers. Chelsea Fan & Blower Co., Inc., Irvington, N. J.
CHEMOX—Hoods, masks and oxygen masks. Mine Safety Appliance Co., Pittsburgh, Pa.
CHERRY HEAT—Compounds for forge welding hammer or roll welding of various steel products. Cortland Welding Compound Co., Cortland, N. Y.
CHESTER—Hoists, trolleys, etc. The National Screw & Mfg. Co., Chester Hoist Div., Lisbon, O.
CHIEF — Fire hose. Quaker Rubber Corp., Philadelphia, Pa.
CHINALAK — Insulating varnish. John C. Dolph Co., Newark, N. J.
CHIP-WELD — Combination welding and chipping goggle. Wilson Products, Inc., Reading, Pa.
CHLOREND—Electrode for hastelloy alloys. Arcos Corp., Philadelphia, Pa.
CHROMANG — Austenitic electrodes. Arcos Corp., Philadelphia, Pa.
CHROME MOLY—Welding rod. Central Steel & Wire Co., Chicago, Ill.
CHROMEND—Stainless steel electrodes. Arcos Corp., Philadelphia, Pa.
CHROME VANOX—Alloy welding rod. Central Steel and Wire Co., Chicago, Ill.
CHROMEWELD 4-6—Electrode. Lincoln Electric Co., Cleveland, O.
CIRCLE C—High-speed steel. Firth-Sterling Steel Co., McKeesport, Pa.
CIRCLE MIXER — Mixing device in oxy-acetylene torches. Modern Engineering Co., Inc., St .Louis, Mo.
CLAMP MASTER—Quick action "C" clamp. Grand Specialties Co., Chicago, Ill.
CIROD—Cast iron weld rod. Cirod Distributing Corp., Lyons, Ill.
CLARK — Post. electric drills and sanders. James Clark, Jr. Electric Co., Louisville, Ky.
CLEAR-SELE — Waterproofing sealer. Rust Oleum Corp., Evanston, Ill.
CLECO—Pneumatic chippers, hammers and scaling tools. Cleco Div., Reed Roller Bit Co., Houston, Texas.
CLE-FORGE—High speed drills. The Cleveland Twist Drill Co., Cleveland, O.
CLETALOY—Material for resistance welding electrodes. Cleveland Tungsten, Inc., Cleveland, O.
CLE-TUNG—Tungsten electrode, atomic hydrogen and inert arc electrodes. Cleveland Tungsten, Inc., Cleveland, O.
CLEVELAND CRANES — Overhead traveling cranes. Cleveland Crane Div. of The Cleveland Crane and Engineering Co., Wickliffe, Ohio.
CLEVELAND TRAMRAIL — Overhead materials handling equipment. Cleveland Tramrail Div. of The Cleveland Crane and Engineering Co., Wickliffe, O.
CLEVE-TUNG—Welding products. Cleveland Tungsten, Inc., Cleveland, O.
CLOVER—Abrasive papers and cloths, grinding, lapping compounds, crocus cloth. Clover Manufacturing Co., Norwalk, Conn.
CLOVER—Crayons for marking of metals. Whittaker, Clark & Daniels, Inc., New York, N. Y.
C-O TWO — Fire extinguisher equipment. C-O Two Fire Equipment Co., Newark, N. J.
COAST METALS—Weld rods. Coast Metals, Inc., Canton, Ohio.
COAST METALS No. 1 (ACETYLENE) AND No. 101 (ARC)—Hard-facing rods. Coast Metals, Inc., Canton, Ohio.
COAST METALS No. 4 (ACETYLENE) AND No. 101 (ARC)—Hard facing rods. Coast Metals, Inc., Canton, Ohio.
COAST METALS No. 8 (ACETYLENE) AND No. 108 (ARC)—Hard-facing rods. Coast Metals, Inc., Canton, Ohio.
COAST METALS No. 10 (ACETYLENE) AND No. 110 (ARC)—Hard-facing rods. Coast Metals, Inc., Canton, Ohio.
COAST METALS No. 18 (ACETYLENE) AND No. 118 (ARC)—Hard-facing rods. Coast Metals, Inc., Canton, Ohio.
COAST METALS No. 112—Hard facing rods. Coast Metals, Inc., Canton, Ohio.
COAST METALS No. X (ACETYLENE) AND No. 100-X (ARC)—Hard facing rods. Coast Metals, Inc., Canton, Ohio.
COAST TWO-WAY — Chipping and scaling air hammers. Coast Pneumatic Tool Co, Los Angeles, Cal.
COBALT BORIUM INSERTS—Fused tungsten carbide. Stoody Co., Whittier, Cal.
COBALTCHROM—Electrodes. Darwin & Milner, Inc., Cleveland, O.
COFEN—Burn solution for welding burns. Lee Wood, Inc., South Norwalk, Conn.
COLALLOY—Flux coated and uncoated welding rods. Colonial Alloys Co., Philadelphia, Pa.
COLAWELD—Flux paste, reaction solder rod. Colonial Alloys Co., Philadelphia, Pa.
COLDARC—Electrodes. Eutectic Welding Alloys Co., New York, N. Y.
COLD ARC IONIZER—Booster for A-C and D-C welders. The A-C Devices Co., Chicago, Ill.
COLDWELL—Low temperature welding alloy. Eutectic Welding Alloys, Inc., New York, N. Y.
COLMONOY—Welding rods and electrodes. Wall Colmonoy Corp., Detroit, Mich.
COLMONOY SPRAY WELDER—Sprays and bonds enamels, plastics and grits. Wall Colmonoy Corp., Detroit, Mich.
COLMONOY SWEAT-ON PASTE — Abrasion resistant paste. Wall Colmonoy Corp., Detroit, Mich.
COLMONOY WCR — Alloys in welding rod form. Wall Colmonoy Corp., Detroit, Mich.
COLONIAL—Leather welders' wearing apparel. Colonial Tanning Co., Milwaukee, Wis.
COLONIAL—Compressed gases. New England Gas Products, Inc., Charlestown, Mass.
COLOR-STRIPE—Coated abrasive papers and cloths. Clover Manufacturing Co., Norwalk, Conn.
COLOR-TIPT — Welding electrodes. Wilson Welder and Metals Co., Inc., New York, N. Y.
COMBI—Electric drills. Wodack Electric Tool Corp., Chicago, Ill.
COMCO—Radial drills and drill presses. Canedy Otto Mfg. Co., Chicago Heights, Ill.
COMET — Electric hoist. Chisholm-Moore Hoist Corp., Tonowanda, N. Y.
COMET—Coated abrasives. Clover Manufacturing Co., Norwalk, Conn.
COMFO—Respirator. Mine Safety Appliances Co., Pittsburgh, Pa.
COMMANDO—Torch lighters, soldering outfits and soldering tips, magnesium welding rods and aluminum solder. J. M. Ragle, Inc., Kansas City, Mo.
COMMERCIAL — Dissolved acetylene. Commercial Acetylene Supply Co., Inc., New York, N. Y.
COMMERCIAL — Acetylene, argon, helium, oxygen and hydrogen Commercial Gas Corp., Wilkes Barre, Pa.
COMMERCIAL — A-C arc welders. Electric Arc, Inc., Newark, N. J.
COMMERCIAL BUTANE — Auxiliary fuel. Hope Natural Gas Co., Clarksburg, W. Va.
COMPRESS—Polishing wheels. Divine Brothers Co., Utica, N. Y.
CONDENS-O-WELD—Resistance welding control. Westinghouse Electric Corp., E. Pittsburgh, Pa.
CONDIT—Circuit breakers and motor starters. Allis Chalmers Mfg. Co., Milwaukee, Wis.
CONDOR—Oxy-acetylene welding hose. Manhattan Rubber Mfg. Co., Div., Raybestos-Manhattan, Inc., Passaic, N. J.
CONNECTICUT—Fans, exhaust, jigs, fixtures and piping, blow, exhaust. Connecticut Blower Co., Hartford, Conn.
CONTINENTAL — Welding rods and electrodes. Continental Steel & Supply Co., San Francisco, Cal.
CONTINENTAL—Electrode holder. Welding Engineering Corp., Milwaukee, Wis.
CONTINENTAL RED SEAL — Gasoline engines. Continental Motors Corporation, Muskegon, Mich.
COOL BAND—Sweat bands. Mine Safety Appliance Co., Pittsburgh, Pa.
COPOX—Flux. Canadian Liquid Air Co., Ltd., Montreal, Canada.
COPPER-ARC — Electrodes. American Arc Welders, Inc., Roseau, Minn.
COPPERED 5G—Welding rods. Central Steel and Wire Co., Chicago, Ill.
COPPERED 6G—Welding wire. Central Steel and Wire Co., Chicago, Ill.
COPPERTITE—Flux for copper. Pittsburgh Metal Purifying Co., Pittsburgh, Pa.
COPPUS—Ventilating blowers, welding exhausters and exhaust fans. Coppus Engineering Corp., Worcester, Mass.
COPPUS VANO VENTILATOR — Ventilator. Coppus Engineering Corp., Worcester, Mass.
COPRCOAT—Steel wire for welding work. Allied Weld-Craft, Inc., Indianapolis, Ind.
CORODEX—Coil cleaner, line scale remover from coils, tanks, steam tables, fountain coils, spray heads, compressor jackets, unit coolers, etc. Allied Products Co., Chicago, Ill.
CORODEX—Paint bond, treats metal surfaces before painting; improves paint bond. Allied Products Co., Chicago, Ill.
CORODEX—Rust preventives; oil type and dry surface; prevents rerusting according to the type desired for handling, shipping, storing, etc. Allied Products Co., Chicago, Ill.
CORODEX—Rust remover; rust remover for iron or steel and corrosion from copper, brass, bronze, chrome and nickel; also removes heat scale. Allied Products Co., Chicago, Ill.
COR-TEN(USS)—Chromium, copper, silicon. United States Steel Subsidiaries, Pittsburgh, Pa.
CORTLAND — Grinding wheels. Cortland Grinding Wheels Corp., Chester, Mass.
CORVIC BRONZE—Copper alloy. Chase Brass & Copper Co., Inc., Waterbury, Conn.
COSMOLINE—Rust exhibitors. E. F. Houghton & Co., Philadelphia, Pa.
COUSE MOBILE REPAIR SHOP — Portable combination welding and machine shop. Couse Mfg. Inc., Newark, N. J.
COUSE WELDING CRUISER—Portable combination welding and machine shop. Couse Mfg. Inc., Newark, N. J.
COVERSPECS—Goggles for welders who wear spectacles. Air Reduction Sales Co., New York, N. Y.
COWLES CLEANERS—Alkaline metal cleaners. Cowles Detergent Co., Cleveland, O.
COYNE—Acetylene cylinders. Coyne Mfg. Co., San Francisco, Cal.
CRACKERJACK—Grinding wheel dressers. The Desmond-Stephen Mfg. Co., Urbana, Ohio.
CRAFTSWELD—Oxy-acetylene welding and cutting equipment. Craftsweld Equipment Corp., Long Island City, N. Y.
CRAMER—Timers. R. W. Cramer Co., Inc., Centerbrook, Conn.
CRANE — Valves, pipe fitting specialties, welded pipe joints, fittings, etc. Crane Co., Chicago, Ill.
CRANELAP — Welding nipple and flange. Crane Co., Chicago, Ill.
CRATER-FILLER — Foot-operated auxiliary control. General Electric Co., Schenectady, N. Y.
CRATEX—Grinding and polishing wheels. Craftex Manufacturing Co, San Francisco, Cal.
CRAWLER — Self-propeplled compressors. Schramm, Inc., West Chester, Pa.
CRESCENT—Welding compound. Anti-Borax Compound Co., Fort Wayne, Ind.
CRESCENT—Wire rope. American Cable Div. of American Chain & Cable Co., Inc., Wilkes Barre, Pa.
CRISTORCH — Welding and cutting torch. The Hamilton Tool Co., Hamilton, O.
CROLOX—Alloy steel. The Babcock & Wilcox Tube Co., Beaver Falls, Pa.
CROLOY—High carbon, high chrome, tool steel. Henry Disston & Sons, Inc., Tacony, Philadelphia, Pa.
CROMALOY—Welding flux. The Linde Air Products Co., New York, N. Y.
CROMANSIL—Alloy steel. Lukens Steel Co, Coatesville, Pa.
CROMANSIL ELECTRODE — Arc welding elec. Metal & Thermit Corp., New York, N. Y.
CROMOCO — Die steel. Firth-Sterling Steel Co., McKeesport, Pa.
CRUCIBLE ARC—electrodes. C. E. Phillips & Co., Detroit, Mich.
CRYSTOLON — Grinding wheels of silicon carbide. Norton Co., Worcester, Mass.
CUMALONG — Hoists. The Harrington Co., Philadelphia, Pa.
CUPALOY—An alloy for tips and wheels for electric resistance welding machines. Westinghouse Electric Corp., East Pittsburgh, Pa.
CUPRO-ARC C—Bronze electrode. Alloy Rods Co., York, Pa.
CURLED CHIP—Metal cutting saws. E. C. Atkins & Co., Indianapolis, Ind.
CUT-A-LINE—Flame cutting machine. Indiana Oxygen Co., Indianapolis, Ind.
CUT-O-MATIC—Portable flame cutting machine. Industrial Oxygen Co., Louisville, Ky.
CUTOMATIC — Abrasive cutting machines. Andrew C. Campbell Div. of American Chain & Cable Co., Inc., Bridgeport, Conn.
CUTLER HAMMER — Magnetic contactors, welding timers, switches and related electrical apparatuses. Cutler-Hammer, Inc., Milwaukee, Wis.
CUTMASTER—Cutting torches. Modern Engineering Co., Inc., St. Louis, Mo.
CUTTEND—Arc-oxygen type electrode. Arcos Corp., Philadelphia, Pa.
CYCLONE—Automatic arcing device. Ergolyte Mfg. Co., Philadelphia, Pa.

CYCLONE — Spur geared hoist. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.

D

DB—Welding and cutting torches, regulators, suppplies and accessories, acetylene generators, specially designed machines for automatic welding and cutting, etc. Air Reduction Sales Co., New York, N. Y.

D-9-VA—Vanadium tool steel. Henry Disston & Sons., Inc., Tacony, Philadelphia, Pa.

D-29 SILICO—Manganese chisel steel. Henry Disston & Sons, Inc., Tacony, Philadelphia, Pa.

DH-2—A-C—D-C electrode for x-ray quality welds. Harnischfeger Corp., Milwaukee, Wis.

D&M — Arc welding electrodes. Darwin & Milner, Inc., Cleveland, O.

D NICKEL — Form of nickel. The International Nickel Co., Inc., New York, N. Y.

DV—Automatic start-stop control and arc time totalizer. DV Welding Controls, Oakland, Cal.

DX ALLOY—Pneumatic and hand chisels. The Dallett Co., Philadelphia, Pa.

DZL — Babbitt metal. Magnolia Metal Co., Elizabeth, N. J.

DALBO—Air hose couplings, air valves. The Dallett Co., Philadelphia, Pa.

DALHART—Spot welding guns, air hydraulic booster, multiple-spot, hydro-automatic welding unit. Dalhart Eng. & Mfg. Co., Van Dyke, Mich.

DALITE—Cover lenses and goggle cover. L. H. Bullock Co., Richmond, Cal.

DALLETT HOSEDRILL—Pneumatic rotating drill. The Dallett Co., Philadelphia, Pa.

DALWELD — Detachable cable connections for welding cable. The Dallett Company, Philadelphia, Pa.

DANDUX—A flame proof canvas welding curtain. C. R. Daniels, Inc., New York, N. Y.

DARWIN—Alloy welding electrodes and rods. Darwin & Milner, Inc., Cleveland, O.

DAYTON—Grinding wheels. Simonds Worden White Co., Dayton, O.

DAYTON SAFETY — Grinding wheels. Simonds Worden White Co., Dayton, O.

DEFENDER—Babbitt metals. Magnolia Metal Co., Elizabeth, N. J.

DELLOY—Hard-facing material. Delloy Metals, Philadelphia, Pa.

DEN-NEX—Skin cream. Dennis Chemical Co., Inc., St. Louis, Mo.

DELTA—Files. Delta File Works, Inc., Philadelphia, Pa.

DENS-O-MATIC — Automatic welding wire. Allied Weld-Craft, Inc., Indianapolis, Ind.

DE-SCALER—Rust and scale remover. Turco Products, Inc., Los Angeles, Cal.

DESMOND — Grinding wheel dressers. The Desmond-Stephan Mfg. Co., Urbana, O.

DESMOND SIMPLEX—Vises. The Desmond-Stephan Mfg. Co., Urbana, O.

DE-STA-CO—Toggle clamps and welding fixture clamps. Detroit Stamping Co., Detroit, Mich.

DEPENDON—Acetate shields. Sellstrom Mfg. Co., Chicago, Ill.

DESPATCH—Heat treating ovens. Despatch Oven Co., Minneapolis, Minn.

DETROIT—Hoists. Detroit Hoist & Machine Co, Detroit, Mich

DE VILBISS—Airline fittings and couplings, air compressors, fans and masks. The De Vilbiss Co., Toledo, O.

DI-ACRO—Shears and punches, cutters and benders, bending brakes. O'Neil-Irwin Mfg. Co., Lake City, Minn.

DI-CAST—Welding rod. Canadian Liquid Air Co., Ltd., Montreal, Que., Canada.

DIAL-AMP—A-C arc welders. Shober Sales, Inc., Stockton, Cal.

DIAMITE—Welding rod. Weatherly Foundry and Mfg. Co., Weatherly, Pa.

DICO—Felt polishing wheels and bobs. Divine Brothers Co., Utica, N. Y.

DIEWELD—Electrode. Steel Sales Corp, Chicago, Ill.

DIFOLD—Buffs. Divine Brothers Co., Utica, N. Y.

DILLON—Portable tensile testing machines. W. C. Dillon and Co., Chicago, Ill.

DISC-CENTER — Wire wheel brushes, cup brushes. The Osborn Manufacturing Co., Cleveland, O.

DIVERSEY — Metal cleaners. The Diversey Corp., Chicago, Ill.

DIVINE—Abrasive belt grinding and polishing machine, polishing and buffing wheels, machinery and supplies. Divine Bros. Co., Utica, N. Y.

DIVISION No. 36—Cleaner and deoxidizer. Diversey Corp., Chicago, Ill.

DIVISION No. 514—Cleaner and deoxidizer. Diversey Corp., Chicago, Ill.

DIVIZOR—For pipe and sheet metal layout work. Interstate Sales Co., New York, N. Y.

DIXON — Graphite rods and plate. Joseph Dixon Crucible Co., Jersey City, N. J.

DO — Electrode holders. Plastal Manufacturing Co., Pasadena, Cal.

DO-ALL — Contour and high speed sawing machines; saw bands, surface grinders and butt welder's. The Do-All Company, Des Plaines, Ill.

DO-ALL—Portable electric tool. Wodack Electric Tool Corp., Chicago, Ill.

DOCKSON — Welding and cutting torches, regulators, goggles, electrode holders, helmets and hand shields, accessories and supplies. Dockson Corp., Detroit, Mich.

DOMINION—Liquid air oxygen and nitrogen. Dominion Oxygen Company, Ltd., Toronto, Ont., Canada.

DOUBLE CIRCLE TOOLS — Drills and reamers, etc. Chicago-Latrobe Twist Drill Works, Chicago, Ill.

DOW — Pneumatic hammer for chipping, scraping, etc. Dow Pneumatic Tool Co., Chicago, Ill.

DOWMETAL — Alloys of magnesium, aluminum, manganese and zinc. The Dow Chemical Co., Midland, Mich.

DRAWALLOY — Welding electrodes. Welding Equipment and Supply Co., Detroit, Mich.

DREDNAUT — Safety and welding goggles. American Optical Co., Southbridge, Mass.

DREDNAUT — Goggles and lenses. Safety Equipment Service Co., Cleveland, Ohio.

DRIOX—Liquid oxygen. The Linde Air Products Company. Carbide and Carbon Bldg., New York, N. Y.

DRY-CRISP — Rust, preventive. Mesix Chemical Co., Chicago, Ill.

DUALARC—Electric welding machines. Electric Arc Inc., Newark, N. J.

DUAL-TOOL — Combination weld cleaning tool. Atlas Welding Accessories Co, Detroit, Mich.

DUCLEAN NO. "1" — Inhibited sulfuric acid. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

DUCLEAN NO. "2" — Inhibited muriatic acid. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

DUCTO — Welding electrode. Hobart Bros., Troy, O.

DUCTONE — Electrodes. Chicago Steel and Wire Co., Chicago, Ill.

DUDGEON — Hydraulic jacks. Richard Dudgeon, Inc., New York, N. Y.

DUO-SQUARE — Work holder. McFerron-Myers Products Co., Rocky River, O.

DUO-TROL — Combined heat control and magnetic welding timer. National Time and Signal Corp., Detroit, Mich.

DUOGRAPH — Automatic power driven welding machine. Air Reduction Sales Co., New York, N. Y.

DUPLEX — Welding and cutting torches. K-G Welding & Cutting Co., Inc., New York, N. Y.

DUPLEX-TANDEM — Regulator. Modern Engineering Co., Inc., St. Louis, Mo.

DURAGARDE — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

DURALOY — Chrome-iron, chrome-nickel-steel, and nickel-chrome-steel alloys. Duraloy Co., Scottdale, Pa.

DURAWELD — Welding goggles. The American Optical Co., Southbridge, Mass.

DURFACE — Special rods and electrodes. Eutectic Welding Alloys Co., New York, N. Y.

DURITE — Silicon carbide coated abrasive. Behr-Manning Corp., Troy, N. Y.

DURONZE — Silicon bronze. Bridgeport Brass Co., Bridgeport, Conn.

DUSTCOTE — Electrode. Harnischfeger Corp., Milwaukee, Wis.

DUSTFOE — Respirators. Mine Safety Appliances Co., Pittsburgh, Pa.

DUSTKOP — Dust collector. Aget-Detroit Co., Ann Arbor, Mich.

DUSTUBE — Dust and fume control equipment. American Wheelabrator & Equipment Corp., Mishawaka, Ind.

DUTCHBOY — Babbitt metal. National Lead Co., New York, N. Y.

DUZWELD — Welding and cutting equipment and supplies New York Welding Supply Co., New York, N. Y.

DYNAFLEX — Hose. Mulconroy Co., Philadelphia, Pa.

DYNAMITE — Hose. Mulconroy Co., Philadelphia, Pa.

E

EC&M — Automatic welding timers. Electric Controller and Mfg. Co., Cleveland, O.

EC&M LINE ARC — Magnetic contactors. Electric Controller and Mfg. Co., Cleveland, Ohio.

EC&M NEOTROL — Weld timers for use on air or hydraulically-operated welding machines. Electric Controller & Mfg. Co., Cleveland, Ohio.

EJ WELDER—Asbestos and horse hide leather gloves for welders. E. J. Streichert, Chicago, Ill.

E-Z — Welding compounds. Anti-Borax Compound Co., Ft. Wayne, Ind.

E-Z — Ground clamps. Will-Weld Manufacturing Co., Omaha, Neb.

E-Z ARC — A-C arc welder. Will-Weld Mfg. Co., Inc., Omaha, Neb.

E-Z CUT — Steel plates. Joseph T. Ryerson & Sons, Inc., Chicago, Ill.

EASTMAN NO-SCREEN — X-Ray film. Eastman Kodak Co., Rochester, N. Y.

EASY-FLOW — Silver brazing alloy. Handy and Harman, New York, N. Y.

EASY-FLOW-3 — Silver brazing alloy. Handy & Harman, New York, N. Y.

EASY-FLOW-35 — Silver brazing alloy. Handy & Harman, New York, N. Y.

EASY-FLOW-45 — Silver brazing alloy. Handy & Harman, New York, N. Y.

EASY MOUNT — Grinding wheels. Sterling Grinding Wheel Div., The Cleveland Quarries Co., Tiffin, Ohio.

EASYWELD — Electrode for A-C arc welding. Universal Welding Corp., Cleveland, Ohio.

EBONITE—Steam hose. Quaker Rubber Corp., Philadelphia, Pa.

ECGCO — Coated cover glass and electric light bulbs. Electro Cover Glass Co., Inc., Sharpsburg Br., Pittsburgh, Pa.

ECONOMIZER — Valve device which shuts off oxygen and acetylene when torch is hung on hooked lever. National Cylinder Gas Co., Chicago, Ill.

ECONOMY — Welding and cutting outfits. Burdett Oxygen Co., Cleveland, Ohio.

ECONOMY — Grinders and buffers. The Hisey Wolfe Machine Co., Cincinnati, Ohio.

EDCO — Bronze electrodes and welding rod. Davies & Son, Inc., Los Angeles, Cal.

EDGEWATER — Fire hose. Quaker Rubber Corp., Philadelphia, Pa.

18-8 STAINLESS — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

EIMAC — Electric tubes; vacuum pumps and high vacuum switches. Eitel-McCullough, Inc., San Bruno, Cal.

EISLER—Electric resistance spot welders and A-C arc welders. Eisler Engineering Co., Newark, N. J.

EITHEREND — Cable connectors. Albert & J. M. Anderson Mfg. Co., Boston, Mass.

EJECTOR TYPE — Electrode holders. S-M-S Corp., Detroit, Mich.

ELECTRIC LACQUER — Insulating varnish. John C. Dolph Co., Newark, N. J.

ELECTRO — Grinding wheels. Electro Refractories and Alloy Corp., Buffalo, N. Y.

ELECTROD—Arc welding electrode. Steel Co. of Canada, Ltd., Hamilton, Ont., Canada.

ELECTROLON — Grinding wheels. Simonds Abrasive Co., Philadelphia, Pa.

ELECTROLOY—Alloys for electrodes and dies for resistance welding machines. Electroloy Co., Inc., Bridgeport, Conn.

ELECTROMET—Ferro-alloys and non-ferrous alloying metals. Electro Metallurgical Sales Corp., Carbide and Carbon Bldg., New York, N. Y.

ELECTRONIC STEAM—Arc, electronic welder. Casco Products, Inc., Chicago, Ill.

ELECTROWELD — Electric welding tube mill. American Electric Fusion Corporation, Chicago, Ill.

ELECTROWELD — Electric spot welding machine. Electric Arc, Inc., Newark, N. J.

ELECTRONIC TORNADO — Carbon arc electric welder. Lincoln Electric Co., Cleveland, Ohio.

ELECTRUNITE — Electric welded mechanical, boiler, condenser and other tubes. Republic Steel Corp., Steel and Tubes Division, Cleveland, Ohio.

ELECTRUNITE ENDORO — Stainless steel tubing and stainless steel pipes. Republic Steel Corp., Steel and Tubes Division, Cleveland, Ohio.

ELECWELD — Electrodes. Steel Sales Corp., Chicago, Ill.

ELEPHANT—Welding Wire. Phosphor Bronze Smelting Co., Philadelphia, Pa.

ELESCO — Locomotive superheaters, feed water heaters, and exhaust steam injectors. Superheater Co., New York, N. Y.

ELGIN — A-C arc welders. Borm Mfg. Co., Elgin, Ill.

ELKALOY — Base alloy for resistance welding electrodes. P. R. Mallory & Co., Inc., Indianapolis, Ind.

ELKONITE — Copper-tungsten composition metals for resistance welding electrodes. P. R. Mallory & Co., Inc., Indianapolis, Ind.

ELKONITE 1W3 — Flash or butt welding dies and projection welding electrodes. P. R. Mallory & Co., Inc., Indianapolis, Ind.

ELKONITE 10W3 — Flash and projection welding dies. P. R. Mallory & Co., Inc., Indianapolis, Ind.

ELKONITE 20W3 — Flash and projection welding electrodes. P. R. Mallory & Co., Inc., Indianapolis, Ind.

ELKONITE 100-W and ELKONITE 100-M — Electrode materials for welding of copper wires. P. R. Mallory & Co., Inc., Indianapolis, Ind.

ELKONITE 3W53 and ELKONITE 10W53 — Copper-tungsten metal compositions which are heat treated to obtain extremely high hardness and strength, to be used in special applications of resistance welding dies for flash welding, electro-forging, projection welding and electro-upsetting. P. R. Mallory & Co., Inc., Indianapolis, Ind.

ELCONITE TC-10, ELKONITE TC-20, and ELKONITE TC-53 — Carbidic composition used as electrode materials for resistance welding such as electro-forging, electrical upsetting, and projection welding. P. R. Mallory & Co., Inc., Indianapolis, Ind.

ELLIOT — Flexible shaft grinders. Elliott Manufacturing Co., Binghamton, N. Y.

ELLPRO — Electrode for arc cutting under water. Ellwood Products Co., Ellwood City, Pa.

ELLSBERG — Under-water cutting torch. Craftsweld Equipment Corp, Long Island City, N. Y.

ELMES — Hydraulic presses, electrode extrusion presses and general purpose presses. Charles F. Elmes Engineering Co., Chicago, Ill.

ELYRIA — Structural steel tubing. Republic Steel Corp., Steel and Tubes Division, Cleveland, Ohio.

EMCO — Hard surfacing metals. Eld Metal Co. Ltd., Los Angeles, Cal.

EMERSON — A-C arc welder. Emerson Electric Mfg. Co., St. Louis, Mo.

ENDURO—Stainless and heat resisting steels. Republic Steel Corp., Republic Bldg., Cleveland, Ohio.

EQUALOD — Motor and generator brushes. Keystone Carbon Co., Inc., St. Marys, Pa.

EQUIPTO — Steel shelving; parts bins; tool cribs; stock carts; work benches; tool stands; and draws for small parts. Equipto Division of Aurora Equipment Co., Aurora, Ill.

ERGOLYTE — A-C arc welders, arc torch for brazing, welding, preheating, etc. Ergolyte Mfg. Co., Philadelphia, Pa.

ESCO — Safety clothing and equipment and weldors' wearing apparel. Eastern Safety Clothing Co., New York, N. Y.

ESSANAY — Fire estinguisher. Pyrene Manufacturing Co., Newark, N. J.

ESSANAY SODA — ACID RECHARGE —Fire extinguisher recharger. Pyrene Manufacturing Co., Newark, N. J.

ESSCO — Stainless steel sheets. Eastern Stainless Steel Corp., Baltimore, Md.

ESSEE — Weldors' clothing and leather. S. C. Leather Co., Pittsburgh, Pa.

EUREKA — Electrode holders. The Fibre-Metal Products Co., Chester, Pa.

EUREKA — Welding helmet. Welding Engineering Co., Milwaukee, Wis.

EUREKA — Soldering flux. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

EUREKA — Welding rods; electrodes and fluxes. Welding Equipment and Supply Co., Detroit, Mich.

EUTECHROM — Welding rods and fluxes. Eutectic Welding Alloys Corp., New York, N. Y.

EUTECROD — Gas welding rods. Eutectic Welding Alloys Corp., New York, N. Y.

EUTECTIC — Welding rods and fluxes. Eutectic Welding Alloys Corp., New York, N. Y.

EUTECTIC LOW TEMPERATURE WELDING RODS — Welding rods Eutectic Welding Alloys Corp., New York, N. Y.

EUTECTOFILM — Coating for low temperature welding. Eutectic Welding Alloys Corp., New York, N. Y.

EUTECTOR — Welding rod fluxes. Eutectic Welding Alloys Corp., New York, N. Y.

EUTECTRODE — Arc electrodes AC-DC. Eutectic Welding Alloys Corp., New York, N. Y.

EVEN CUT — Sanding Drums. R. G. Haskins Co., Chicago, Ill.

EVERDUR — Welding rod. American Brass Co., Waterbury, Conn.

EVERITO — Metal cleaner. Diversey Corp., Chicago, Ill.

EVER-KLEAR — Cover glass for welding goggles and arc welding shields. F. R. Faulk, Pittsburgh, Pa.

EVERITE — Rust and scale remover. Diversey Corp., Chicago, Ill.

EVERSTAY — Metal alloy for repairing scored cylinders. The Omaha Welding Co., Omaha, Neb.

EVER-STICK — Alloy for repairing scored cylinders. Federated Metals Division, American Smelting and Refining Co., Whiting, Ind.

EXCELOLITE — Welding lens. Sellstrom Mfg. Co., Chicago, Ill.

EXCITRON — Rectifier. Allis Chalmers Mfg. Co., Milwaukee, Wis.

EXPERT — Welding and cutting equipment. Modern Engineering Co., Inc. St. Louis, Mo.

EXTA — Water hardening tool steel. Henry Disston & Sons, Inc., Tacony, Philadelphia, Pa.

EXTRA-FLEX — Welding cable. Burdett Oxygen Co., Cleveland, Ohio.

EYE-GARD — Welding goggles, lens. Burdett Oxygen Co., Cleveland, Ohio.

EYE SAVER — Safety goggle. Watchemoket Optical Co., Inc., Providence, R. I.

EZY-FLEX — Welding cable. National Welders Supply Co., Charlotte, N. C.

F

F-M — Cooling unit for circulating liquid coolant through electrode tips of spot welder. Fairbanks-Morse and Co., Chicago, Ill.

FW—AC-DC electrode. Harnischfeger Corp., Milwaukee, Wis.

FACEWELD — Welding electrode. Lincoln Electric Co., Cleveland, Ohio.

FAIRWAY — Salt tablets and plastic dispensers. Standard Safety Equipment Co., Chicago, Ill.

FALCON — Heaters and controls coils; furnaces; pots and kettles. Falcon Equipment Co., New Brighton, Pa.

FANSTEEL — Tungsten electrode. Fansteel Metallurgical Corp., N. Chicago, Ill.

FANWELD — Hard facing metal. Fansteel Metallurgical Corp., North Chicago, Ill.

FANWELD — Hard facing welding rod. Vascoloy-Ramet Corp., Waukegan, Ill.

FARCO ALUMINUM WELDING FLUX — Flux. Farrelloy Co., Philadelphia, Pa.

FARCO MAGNESIUM FLUX — Flux. Farrelloy Co., Philadelphia, Pa.

FARCO STAINLESS STEEL WELDING FLUX — Flux. Farrelloy Co., Philadelphia, Pa.

FARCO TINNING COMPOUND — Powder solder. Farrelloy Co., Philadelphia, Pa.

FAST-FLO FLUX—Silver brazing flux. American Chemical and Flux Co., Brooklyn, N. Y.

FASTFOME—Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

FASTFOME FOAM RECHARGER — Fire extinguisher recharger. Pyrene Manufacturing Co., Newark, N. J.

FAST-SET—Red button pipe cutter. A. D. McBurney, Los Angeles, Cal.

FASTWELL — High speed electrode. Steel Sales Corp., Chicago, Ill.

FEATHERLIGHT — Arc welding electrode holders. Jackson Products, Warren. Mich.

FEDERAL — Resistance welders. The Federal Machine & Welder Co., Warren, Ohio.

FEND — Industrial skin creams and lotions. Mine Safety Appliances Co., Pittsburgh, Pa.

FERREX — Metals cleaner. Turco Products, Inc., Los Angeles, Cal.

FERRO — Cast iron welding flux. The Linde Air Products Co., New York, N. Y.

FEATHERWEIGHT—Transparent face shields. Dockson Corp., Detroit, Mich.

FEDERAL — Electric spot welding machinery, projection welders, seam welders, portable welders, flash welders, heaters and electric transformers. Federal Machine and Welder Co., Warren, Ohio.

FEND — Protective skin creams. Mine Safety Appliances Co., Pittsburgh, Pa.

FERROWELD — Welding electrode. Lincoln Electric Co., Cleveland, Ohio.

FETHERWATE — STREAMLINER — Weldors' helmet. Sellstrom Mfg. Co., Chicago, Ill.

FILLEX — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

FILTERWELD — Glass for welding helmet and goggles. American Optical Co., Southbridge, Mass.

FIRECRETE — Refractory cement. Johns-Manville, New York, N. Y.

FIREFITE — Fire hose. Quaker Rubber Corp., Philadelphia, Pa.

FIREFOIL — Panel. The Philip Carey Mfg. Co., Lockland, Cincinnati, Ohio.

FIREYE — Electronic controls and furnaces. Combustion Control Corp., Cambridge, Mass.

FIRTHALOY — Sintered carbide adapted to wire drawing dies, extrusion dies and similar purposes. Firth-Sterling Steel Co., McKeesport, Pa.

FIRTHITE — Form of sintered tungsten carbide for cutting tools, gauges, etc. Firth-Sterling Steel Co., McKeesport, Pa.

FLAMATIC — Hardening machine. The Cincinnati Milling Machine Co., Cinn., Ohio.

FLAME — Bulletin, published by Modern Engineering Co., Inc., St. Louis, Mo.

FLAMEBLAST — Gas-electric blow torch. Made by North American Mfg. Co., Cleveland, Ohio.

FLAMEMASTER — Carbon arc; arc welding and brazing torch. F. R. Faulk, Pittsburgh, Pa.

FLAMEMASTER — Carbon arc; arc welding Indiana Oxygen Co., Indianapolis, Ind.

FLAME-PRUF — Water soluble powder for treating clothes or other fabrics which prevents them from igniting when exposed to sparks. Wolfe-Kote Co., Sheboygan, Wis.

FLAME-RITE — Oxy-acetylene regulators, torches and welding equipment. National Welders Supply Co., Charlotte, N. C.

FLAME SHAPER — Portable flame cutting machines. Shrader-Bowers Co., Mishawaka, Ind.

FLASH — Circle burner. Scientific Research Co., Portland, Ore.

FLASH-EX — Welding spatter compound. Wayne Chemical Products Co., Detroit, Mich.

FLASH OFF NO. 99 — Welding spatter compound. Acme White Lead & Color Wks., Detroit, Mich.

FLATWEAVE — Wire rope sling. John A. Roebling's Sons Co., Trenton, N. J.

FLEET-ARC — A-C welders. Lincoln Electric Co., Cleveland, Ohio.

FLEETWELD — Shielded arc electrodes by Lincoln Electric Co., Cleveland Ohio.

FLEETWELDER—AC welding electrodes. The Lincoln Electric Co., Cleveland, Ohio.

FLEXALOY — Alloy hard-facing electrodes. The Bergestrom Alloys Corp., Reno, Nevada.

FLEXARC — Arc welding machines and electrodes. Westinghouse Electric Corp., East Pittsburgh, Pa.

FLEXARC ACP — Arc welding electrodes. Westinghouse Electric Corp., E. Pittsburgh, Pa.

FLEXARC AP—Electrode. Westinghouse Electric Corp., East Pittsburgh, Pa.

FLEXARC DH — Electrode. Westinghouse Electric Corp., East Pittsburgh, Pa.

FLEXARC FP — Flux-coated electrode. Westinghouse Electric Corp., E. Pittsburgh, Pa.

FLEXARC SW — Electrodes. Westinghouse Electric Corp., East Pittsburgh, Pa.

FLEXARC SW-2 — Arc welding electrodes. Westinghouse Electric Corp., East Pittsburgh, Pa.

FLEXAUST — Ventilating hose. American Ventilating Hose Co., New York, N. Y.

FLEX-SET — Wire rope. Broderick & Bascom Rope Co., St. Louis, Mo.

FLEXSPEED — Buffing and polishing lathe. Divine Brothers Co., Utica, N. Y.

FLINT—Gas spark lighters and renewal flints. Flint Products Co., Brooklyn, N. Y.

FLINTYPE — Hard-facing electrode. Arcway Equipment Co., Philadelphia, Pa.

FLINTYPE VH — Hard-facing alloy. Resisto-Loy Co., Grand Rapids, Mich.

FLINTWELD — Hard surfacing rod. Steel Sales Corp., Chicago, Ill.

FLO-EZ-FLUX — Gas welding aluminum fluxes. Park-Stewart, Worthington, Pa.

FLO-EZ-FLUX NO. 5 — Gas welding magnesium fluxes. Park Stewart, Worthington, Pa.

FLOOD — Helmets. Borm Mfg. Co., Elgin, Ill.

FLOTECTIC — Flux. Eutectic Welding Alloys Co., New York, N. Y.

FLOTITE—Welding fluxes. Pittsburgh Metals Purifying Co., Pittsburgh, Pa.

FLOTITE NO. 1 — Cast iron welding flux. Pittsburgh Metals Purifying Co., Pittsburgh, Pa.

FLOTITE NO. 3 — Brazing flux. Pittsburgh Metals Purifying Co., Pittsburgh, Pa.

FLOTITE-WONDER SOLDER—Solder for aluminum. Pittsburgh Metals Purifying Co. Pittsburgh, Pa.

FLO—WELL NO. 1 — Flux for gas welding. A. K. Mauk, Pittsburgh, Pa.

FLO-WELL NO. 2 — Brazing flux. A. K. Mauk Pittsburgh, Pa.

FLUD-LITE — Illuminated magnifier. Stanley Electric Tools. New Britain, Conn.

FLUX-RITE—Welding fluxes. National Welders Supply Co., Charlotte, N. C.

FLUX-STIK — Soldering flux. Lake Chemical Co., Chicago, Ill.

FLUX-WELL — Welding and brazing fluxes and compounds. Chicago Hardware Foundry Co., North Chicago, Ill.

FLUXINE — Soft soldering fluxes. Krembs & Co., Chicago, Ill.

FOILLE — Burn spray and first aid kit. Mine Safety Appliances Co., Pittsburgh, Pa.

FOAMITE — Fire extinguishers and air foam. American La France—Foamite Corp., Elmira, N. Y.

FOAMITE CRUSADER — Fire extinguishers. American La France—Foamite Corp., Elmira, N. Y.

FORD — Chain hoist. Ford Chain Block Division of American Chain & Cable Co., Inc., York, Pa.

FORMINCO — Products used for welding rod and electrode coatings and fluxes. Made by the Foote Mineral Co., Philadelphia, Pa.

FORNEY — A-C and D-C arc welders. Forney Mfg. Co., Ft. Collins, Colo.

FRANKLIN — A-C welder. Franklin Transformer Manufacturing Co., Minneapolis, Minn.

FREE-FLO — Cast iron welding rods. Atlas Foundry Co., Cleveland, Ohio.

FREEMACHINE WELD — Cast iron welding electrodes. Westinghouse Electric Corp., E. Pittsburgh, Pa.

FRE-FLO ALLOY NO. 7 — Cast iron rods for high pressure welding. Atlas Foundry Co., Cleveland, Ohio.

FRE-FLO MOLY-NICKEL — Cast iron alloy welding rods. Atlas Foundry Co., Cleveland, Ohio.

FRESHAIR—Supplied air helmets. The Fibre-Metal Products Co., Chester, Pa.

FRIGID-ARC—Welding rods. Eutectic Welding Alloys Corp., New York, N. Y.

FRIGID WELD ROD—Welding rods, Eutectic Welding Alloys Corp., New York, N. Y.

FROGALLOY — Stainless electrodes. McKay Co., Pittsburgh, Pa.

FRONTENAC — A-C arc welders. Canadian Liquid Air Co., Ltd., Montreal, Que., Canada.

FROSTRODE — Refrigeration cabinets for cooling spot welder electrodes. Frostrode Products, Detroit, Mich.

FULLBACK — Leather welding gloves. E. J. Streichert, Chicago, Ill.

FUL-VUE — Goggles. American Optical Company, Southbridge, Mass.

FUMELESS WELDING ROD NO. 240 — Fumeless bronze welding rod. Mueller Brass Co., Port Huron, Mich.

FURNAS-CRETE—Castable refractory. Mexico Refractories Co., Mexico, Mo.

FUSEBOND — Metallizing equipment. Metallizing Engineering Co., Inc., Long Island City, N. Y.

FUSE-WELL — Cast iron rods and electrodes cast aluminum rods. Chicago Hardware Foundry Co., North Chicago, Ill.

FUSERITE — Welding and cutting torches, cutting machines and specialties. Harris Sales Co., Lansdowne, Pa.

FUZEE — Metals and parts cleaner. Turco Products, Inc., Los Angeles, Cal.

FUZON — Alloy welding electrodes. Chicago Steel and Wire Co., Chicago, Ill.

G

GARALUN — Aluminum oxide. Armour Co., Chicago, Ill.

G ELECTROLON—Grinding wheels. Simonds Abrasive Co., Philadelphia, Pa.

G-E — Electric arc-welding machines, X-ray machines, electrodes, and accessories. General Electric Co., Schenectady, N. Y.

G.M.C. — Resistance type welder. Guyan Machinery Co., Logan, W. Va.

G.M.C. — Welding torches. The Harris Calorific Co., Cleveland, Ohio.

G-R — Arc welders of the transformer type. Glenn-Roberts Co., Oakland, Cal.

GALVALLOY — Alloy compound. Metalloy Products Co., Los Angeles, Cal.

GAR-BRO — Cylinder tank trucks. Garlinghouse Bros., Los Angeles, Cal.

GARDWELL — Asbestos mittens and gloves for welders. Safety Clothing & Equipment Co., Cleveland, Ohio.

GARIBAY — Mechanical welding cable connector. Yarco Distributors, Los Angeles, Cal.

GARIBAY STINGER — Arc welding electrode holder. Garibay Mfg. Co., Montebello, Cal.

GARIBAY 350 — Electrode holder. Garibay Mfg. Co., Montebello, Cal.

GAS CARBOX — Bright copper finish welding rod. Central Steel and Wire Co., Chicago, Ill.

GAS FLUX — Liquid brazing flux. Gas Flux Mfg. Co., Mansfield, Ohio.

GAS-FLUXER — Unit for dispensing liquid flux into the acetylene line of a gas welding outfit. Gas Flux Co., Mansfield, Ohio.

GASAVER — Gas economizer. The Harris Colorific Co., Cleveland, Ohio.

GASAVER — Valve device which turns off oxygen and acetylene when torch is hung on hook lever. Weldit Acetylene Co., Detroit, Mich.

GASO — Straight line and shape cutting machines. Gaso Equipment Co., Chicago, Ill.

GAS-O-DOME—Regulator. Victor Equipment Co., San Francisco, Cal.

GASTON—Portable gun welder. Alcasco Fdry. & Mfg. Co., Harvey, Ill.

GASTON BULL-DOG — Portable electric grinder and snagger. Gaston Power Tools, Evergreen Park, Ill.

GASWELD — Flux for welding cast iron or steel. Imperial Brass Mfg. Co., Chicago, Ill.

GASWELD — Welding and cutting torches, regulators and accessories. Wall Chemicals Div., The Liquid Carbonic Corp., Chicago, Ill.

GELLID ENGINEERING — Portable welding units. Gellid Engineering, Oak Park, Ill.

GEM — Electrode holder for arc welding. Gem Electrode Holder Co., New York, N. Y.

GENERAL — Toggle clamps; welding positioner. The General Welding Co., Cleveland, Ohio.

GENEX — Arc welding electrode. Metal & Thermit Co., New York, N. Y.

GES — Electric hand shears. Jefferson Engineering & Mfg. Co., Detroit, Mich.

GEWECO — Welding and cutting apparatus and automatic shape cutting machines. General Welding and Equipment Co., Boston, Mass.

GLAREGARD — Lenses. Dockson Corp., Detroit, Mich.

GLASCOTE — Transparent liquid coating. John C. Dolph Co., Newark, N. J.

GLOBEIRON TUBES — Ingot iron tubes. Globe Steel Tubes Co., Milwaukee, Wis.

GLOWELD — Welded stainless steel tubes. Globe Steel Tubes Co., Milwaukee, Wis.

GLYPTAL — Synthetic resin. General Electric Co., Schenectady, N. Y.

GOODRICH, B. F.—Welding hose. B. F. Goodrich Co., Akron, Ohio.

GORHAM HIGH SPEED WELDING METAL — Tool steel welding rod. Gorham Tool Company, Detroit, Mich.

GOSS—Adaptors, electrode holders, couplings and fittings, manifolds and oxygen, tips welding gas, etc. Goss Gas, Inc., Pittsburgh, Pa.

GRADIATION — Heating equipment. Selas Corp. of America, Philadelphia, Pa.

GRAHAM — Rotary files. Graham Rotary File & Tool Corp., Philadelphia, Pa.

GRAND CHAMP—Spatter-proofed "C" clamp. Grand Specialties Co., Chicago, Ill.

GRAND CLAMPMASTER — Quick Action Spatter-proofed "C" clamp. Grand Specialties, Chicago, Ill.

GRAND DELUX — Spatter-proofed malleable iron "C" clamp. Grand Specialties Co., Chicago, Ill.

GRAND DUAL GRIP — Spatter-proofed "C" clamp. Grand Specialties Co., Chicago, Ill.

GRAND HEAVY DUTY SPEED CLAMP — Spatter-proofed lever locking "C" clamp. Grand Specialties Co., Chicago, Ill.

GRAND QUICK LOCKCET — Spatter-proofed quick gripping "C" clamp. Grand Specialties Co., Chicago, Ill.

GRAND QUIKCET — Quick action Spatter-proofed "C" clamp. Grand Specialties Co., Chicago, Ill.

GRAYDAC—Electrode. Champion Rivet Company, Cleveland, Ohio.

GRAY DEVIL — Electrodes. Champion Rivet Co., Cleveland, Ohio.

GRAY DEVIL NO. 2 — Electrode. Champion Rivet Company, Cleveland, Ohio.

GREENLEE — Benders, conduit, pipe and tubing. Greenlee Tool Co., Rockford, Ill.

GREEN-STRIPE — Sandpaper. Clover Mfg. Co., Norwalk, Conn.

GREYHOUND — A-C and D-C arc welders, transformers, resistance welding. Greyhound A-C Arc Welder's Corp., Brooklyn, N. Y.

GRIFFIN — Hack saw blades and band saws. G. W. Griffin Co., Franklin, N. H.

GRINNELL — Welding fittings and prefabricated piping. Grinnell Co., Inc., Providence, R. I.

GRIP-LOK — Grinding wheels. Safety Grinding Wheel and Machine Co., Springfield, Ohio.

GRIPPO-HANDLE — Hand drill. The United States Electrical Tool Co., Cincinnati, Ohio.

GRIP-TITE — Brush holder for brush attached to chipping hammer. Atlas Welding Accessories Co., Ferndale, Mich.

GUARDENE—Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

GUARDENE SODA-ACID RECHARGER—Fire extinguisher recharger. Pyrene Manufac-

GUARDSMAN — Attachment which can be placed upon a single stage oxygen regulator to make it operate in two stages of reduction. K-G Welding and Cutting Co., New York, N. Y.

H

H—Aluminum flux. Bierman-Everett Foundry Co., Irvington, N. J.

H.H.—Indicator. H. H. Sell Electric Co., Minneapolis, Minn.

H & M — Pipe cutting and beveling machine. H. & M. Pipe Beveling Machine Co., Tulsa, Okla.

HOCO — Oxygen and acetylene gases compressed in cylinders. Houston Oxygen Co., Houston, Texas.

HPM — Hydraulic presses including presses for electrode extrusion coating. Hydraulic Press Mfg. Co., Mt. Gilead, Ohio.

H. W. D. — Chromium-molybdenum hot-work die steel. Firth-Sterling Steel Co., McKeesport, Pa.

HACKNEY — Compressed gas cylinders. Pressed Steel Tank Co., Milwaukee, Wis.

HALLOWELL — Steel work benches. The Standard Pressed Steel Co., Jenkintown, Pa.

HAMILTON — Rotary files and drilling machine. The Hamilton Tool Co., Hamilton, Ohio.

HAMMETT — A-C arc welders. Hammett Electric Mfg. Co., Kansas City, Mo.

HAMPTON — A-C electric welders, electrode holders, portable electric saws, etc. Hampton Electric Mfg. Co., New Kensington, Pa.

HANDIWICH—Hoist, hand and power. American Hoist & Derrick Co., Saint Paul, Minn.

HANDY — Silver solders. Handy & Harman, New York, N. Y.

HANDY FLUX — Silver brazing flux. Handy & Harman, New York, N. Y.

HANOVER NOT-A-SEAM — Welders gloves. Hanover Glove Co., Hanover, Pa.

HANOVER MASTER WELDER — Welders gloves. Hanover Glove Co., Hanover, Pa.

HAR-WORTH — Welding electrode holders. The Har-Worth Mfg. Co., Portland, Ore.

HARCAST — A-C—D-C mild steel electrode for welding cast iron. Harnischfeger Corp., Milwaukee, Wis.

HARCHROME — A-C—D-C chromium electrodes. Harnischfeger Corp., Milwaukee, Wis.

HARCOTE — Electrodes for hard-facing. Harnischfeger Corp., Milwaukee, Wis.

HARD DEVIL — Hard surfacing. The Champion Rivet Co., Cleveland, Ohio.

HARD-NITE — Hard facing metal. Eld Metal Co., Ltd., Los Angeles, Cal.

HARDENTOUGH — Hard facing electrodes. Westinghouse Electric Corp., E. Pittsburgh, Pa.

HARDEX—Heavily coated welding electrodes. Metal & Thermit Corp., New York, N. Y.

HARDFACER NO. 11 AND NO. 112 — Coated type electrodes for hard-facing. Hobart Bros. Co., Troy, Ohio.

HARDWELD — Welding electrode. The Lincoln Electric Co., Cleveland, Ohio.

HARGRAVE — "C" clamps, cold chisels and other small hand tools. The Cincinnati Tool Co., Cincinnati, Ohio.

HARMONANG A — Coated manganese molybdenum electrode. Harnischfeger Corp., Milwaukee, Wis.

HARRIS — Welding and cutting equipment, torches, regulators, acetylene generators, brazing and lead burning "Gasaver" and gas filter equipment, manifolds, cylinder valves, accessories and supplies. Harris Calorific Co., Cleveland, Ohio.

HARRISBURG — Seamless drawn steel cylinders, welded pipe coils, drop forged pipe flanges for welding and other steel products. Harrisburg Steel Corporation, Harrisburg, Pa.

HARSTAIN — A-C—D-C electrodes for welding stainless steels. Harnischfeger Corp., Milwaukee, Wis.

HARTUNG — Coated tungsten molybdenum electrode. Harnischfeger Corp., Milwaukee, Wis.

HASCROME — Chromium-manganese-iron hard-facing welding rod. Haynes Stellite Co., New York, N. Y.

HASKINS — Flexible shaft equipment and rotary files. R. G. Haskins Co., Chicago, Ill.

HASTELLOY — Nickel-base. Haynes Stellite Co., New York, N. Y.

HAUCK — Oil burning torches, furnaces, and firepots. Hauck Manufacturing Co., Brooklyn, N. Y.

HAYES — Alloys, and precision castings. Haynes Stellite Co., New York, N. Y.

HAYNES STELLITE — Non-ferrous alloys. Haynes Stellite Co., New York, N. Y.

HAYNES STELLITE STAR J — Metal cutting tools. Haynes Stellite Co., New York, N. Y.

HAYNES STELLITE 98M2 — Metal cutting tools. Haynes Stellite Co., New York, N. Y.

HAYSTELLITE — Cast tungsten-carbide diamond substitute. Haynes Stellite Co., New York, N. Y.

HAZACORD — Welding cable. Hazacord Insulated Wire Works, Wilkes-Barre, Pa.

HEALTHGUARD — Sand blast masks. Chicago Eye Shield Co., Chicago, Ill.

HEAVY-DUTY — Grinding wheel pressers. The Desmond-Stephan Mfg. Co., Urbana, Ohio.

HEAVY-DUTY — Ground clamps. Wagner Manufacturing Co., Inc., Jackson, Mo.

HELIAGON — Inert gas arc welding torches. Bernard Welding Equip. Co., Chicago, Ill.

HELIARC — Inert gas-shielded arc welding apparatus. The Linde Air Products Co., New York, N. Y.

HELLITE — Refractory cement. Johns Manville, New York, N. Y.

HEMATOX — Cast iron flux. Canadian Liquid Air Co., Ltd., Montreal, Que., Canada.

HERCO — A-C transformer type arc welders. Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.

HERCULES — Copper coated low carbon steel welding rod. Canadian Liquid Air Co., Ltd., Montreal, Que., Canada.

HERCULES — Split shaft power take-off. Hercules Steel Products Co., Galion, Ohio.

HERCULES — Gasoline, gas, kerosene and Diesel engines. Hercules Motors Corp., Canton, Ohio.

HERCULES — Type holder and type. The Acro Mark Co., Elizabeth, N. J

HERCULITE—Welding shield helmets. Dockson Corp., Detroit, Mich.

HERCULOY — Silicon bronze welding rods. Revere Copper and Brass, Inc., New York, N. Y.

HERO — Hose. Mulconroy Co., Philadelphia, Pa.

HEVI-DUTY — Heat treating furnaces. Hevi Duty Electric Co., Milwaukee, Wis.

HEVY-DUTY — Head stamps. The Acromark Co., Elizabeth, N. J.

HEVIKOAT — Heavily flux coated, shielded arc type steel electrode. The Universal Welding Co., Cleveland, Ohio.

HEX — Grinding wheel dressers. The Desmond-Stephan Mfg. Co., Urbana, Ohio.

HEXACON—Electric soldering irons. Hexacon Electric Co., Roselle Park, N. J.

HI-CYCLE — High frequency unit. Will-Weld Manufacturing Co., Inc., Omaha, Neb.

HI-DUTY — Soldering outfits. Imperial Brass Manufacturing Co., Chicago, Ill.

HILO-CHROME — Bonding mortar. Mexico Refractories Co., Mexico, Mo.

HI-SPEED — Oxy-acetylene welding and cutting torches. Dockson Corp., Detroit, Mich.

HI-SPEED — Grinding compounds. Clover Manufacturing Co., Norwalk, Conn.

HI-STEEL — Low alloy steel. Inland Steel Co., Chicago, Ill.

HI-TENSILE — Coated electrodes. Page Steel and Wire Division of American Chain and Cable Co., Inc., Monessen, Pa.

HI-TEST — Non-fuming flux. Air Reduction Sales Company, New York, N. Y.

HI-WAVE — Spot welders of condenser discharge type. Taylor-Winfield Corp., Warren, Ohio.

HICARWELD — High carbon steel welding rod. Steel Sales Corp., Chicago, Ill.

HIGH SPEED — Tinning flux. E. I. duPont de Nemours & Co., Inc., Wilmington, Del.

HIGH SPEED — A-C welder contactor. Square D Co., Milwaukee, Wis.

HIGH VISIBILTY — Protective lens. Lincoln Electric Co., Cleveland, Ohio.

HILOSET — Bonding mortar. Mexico Refractories Co., Mexico, Mo.

HISEY — Grinders and buffers. Hisey-Wolf Machine Co., Cincinnati, Ohio.

HOBART — A-C and D-C arc welding machines, electrodes and equipment. Hobart Bros. Co., Troy, Ohio.

HOBART NO. 111 H. T. — Shielded arc type electrode. Hobart Brothers Co., Troy, Ohio.

HOBART NO. A.C. 77 — Electrode. Hobart Brothers Co., Troy, Ohio.

HOBART NO. 55 — Heavy coated electrode. Hobart Brothers Co., Troy, Ohio.

HOBART AC 55 — Electrode. Hobart Brothers Co., Troy, Ohio.

HOBART NO. 77 — A-C electrode. Hobart Brothers Co., Troy, Ohio.

HOBART NO. 111 — Shielded arc type electrode, Hobart Brothers Co., Troy, Ohio.

HOBART NO. 885 — Electrode for shielded arc welding. Hobart Bros. Co., Troy, Ohio.

HOBART STAINLESS NO. 308 — Electrode for welding chrome nickel alloys. Hobart Bros. Co., Troy, Ohio.

HOBART STAINLESS NO. 309 — Electrode for welding chrome nickel alloy. Hobart Bros. Co., Troy, Ohio.

HOBART STAINLESS NO. 310 — Electrode for welding chrome nickel alloy. Hobart Bros. Co., Troy, Ohio.

HOBART STAINLESS NO. 316 — Electrode for welding chrome-nickel moly. Hobart Bros. Co., Troy, Ohio.

HOBART STAINLESS NO. 330 — Electrode for stainless steel. Hobart Bros. Co., Troy, Ohio.

HOBART STAINLESS NO. 347 — Electrode for welding chrome nickel alloys. Hobart Brothers Co., Troy, Ohio.

HOBART ALUMINUM — Electrode aluminum. Hobart Brothers Co., Troy, Ohio.

HOBRONZ — Electrode for carbon arc. Hobart Brothers Co., Troy, Ohio.

HOCO — Oxygen acetylene. Houston Oxygen Co , Houston, Tex.

HOKE — Torches, regulators, valves, laboratory and other equipment. Hoke, Inc., Englewood, N. J.

HOKE-JEWEL — Oxy-gas torches. Hoke, Inc., Englewood, N. J.

HOKE-PHOENIX — Regulators or reducing valves for compressed gases. Hoke, Inc., Englewood, N. J.

HOLD ARK — Welding electrodes. Speer Carbon Co., St. Marys, Pa.

HOL-GRIP — Insulated hole-type electrode holders. Tweco Products Co., Wichita, Kan.

HOL-TITE—Electrode holder. Hol-Tite Holder Co., West Frankfort, Ill.

HOLCOMB PROTECTION — Welders' safety garments. Holcomb Safety Garments Co., Chicago, Ill.

HOLCROFT — Furnaces. Holcroft & Co., Detroit, Mich.

HOLD-ARK — Carbon arc welding rods. Speer Carbon Co., St. Marys, Pa.

HOLE SHOOTER — Electric portable drills. Milwaukee Electric Tool Corp., Milwaukee, Wis.

HOLGUN — Portable electric drill. The Black & Decker Mfg. Co., Towson, Md.

HOLLUP—Arc welding equipment, electrodes, gas welding rod and accessories. Hollup Corporation, Div., National Cylinder Gas Co., Chicago, Ill.

HOMOX — Acetylene and oxygen gases. Home Oxygen Co., Inc., Huntington Park, Cal.

HONEYBEE — Arc welding control set. Wilson Welder and Metals Co., Inc., New York, N. Y.

HOPANE — A liquefied gas. Hope Natural Gas Co., Clarksburg, W. Va.

HORNET—Electric arc welder. Wilson Welder and Metals Co., New York, N. Y.

HOT SPARK — Torch lighter and flints. Randall Manufacturing Co., North Kansas City, Mo.

HOT SPARK — Spark lighters. Welding & Cutting Materials Co., Kansas City, Mo.

HOT SPOT — Spot welders. Acme Electric Welder Co., Los Angeles, Cal.

HOT SPOT — Flint equipped gas lighter. Universal Power Corp., Cleveland, Ohio.

HOTMARX — Metal marking crayons. The Amer. Crayon Co., Sandusky, Ohio.

HOYT — Babbitt metal. National Lead Co., New York, N. Y.

HUDORKUT — Abrasives cutting machine. Andrew C. Campbell Div. of Amer. Chain & Cable Co., Inc., Bridgeport, Conn.

HOUGHTO-CLEAN — Metal cleaners. E. F. Houghton & Co., Philadelphia, Pa.

HULTGREN — Power furnaces. Ajax Electrothermic Corp., Div., Ajax Metal Co., Philadelphia, Pa.

HUNTSMAN — Welding helmets and shields. Huntsman Welding Shield Co., Salt Lake City, Utah.

HUNTSMAN—Welding helmets. Kedman Co., Salt Lake City, Utah.

HUNTSMAN — Arc and gas welding shields. Davis Emergency Corp., Newark, N. J.

HURBENIUM — Lead alloy coating. Hurbenium Co., Napoleon, Ohio.

HYCARB — High carbon welding electrode. Universal Power Corp., Cleveland, Ohio.

HYDROGARDE — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

HYDROSPEED — Multiple point spot welders. The Taylor-Winfield Corp., Warren, Ohio.

HY-LO — Welding electrodes. The Champion Rivet Co., Cleveland, Ohio.

HYMAG — Magnesium silicate; Foote Mineral Co., Philadelphia, Pa.

I

I-O-C — Oxygen acetylene. Indiana Oxygen Co., Indianapolis, Ind.

ISC — Flame cutting machine that is electronically controlled. Industrial Scientific Co., New York, N. Y.

IDEAL — Various electrical items and tools. Ideal, Sycamore, Ill.

IDEAL — Face shield and lens. Ideal Face Shield Co., Columbus, Ohio.

IDEAL—Welders' handshields. Welding Engineering Corp., Milwaukee, Wis.

IGNITRON — Timing equipment for resistance welding machines. Westinghouse Electric Corp., East Pittsburgh, Pa.

ILLIUM — Corrosion resistant electrodes. Burgess-Parr Co., Freport, Ill.

IMMUNITE — Welding lens. Harry Buegeleisen, Inc., Brooklyn, N. Y.

IMPERIAL — Welding and cutting torches, regulators, fluxes, accessories, and supplies. Imperial Brass Manufacturing Co., Chicago, Ill.

IMPROVED OVAL CAP — Torch lighter. Flint Products Co., Brooklyn, N. Y.

IN-CEL-ATE—Insulating cement. Mexico Refractories Co., Mexico, Mo.

INCONEL—Corrosion-resistant alloy. The International Nickel Co., New York, N. Y.

INCONEL-CLAD STEEL — Steel plate composed of a layer of solid Inconel. Lukens Steel Co., Coatesville, Pa.

INCONEL-X — Age harderable alloy. The International Nickel Co., Inc., New York, N. Y.

INDEPENDENT — Acetylene cylinders, acetylene charging or compressing plants, oxygen plants; equipment and fittings of all kinds used in the compression of oxygen, acetylene, propane or other gases. Independent Engineering Co., O'Fallon, Ill.

INDIANA — Oxygene acetylene. Indiana Oxygene Co., Indianapolis, Ind.

INDUSTRIAL CRANE — Cranes. Industrial Equipment Co., Chicago, Ill.

INDUSTRO — Welding glass. Willson Products, Inc., Reading, Pa.

INGACLAD — Stainless clad steel. Ingersoll Steel & Disc Div., Borg-Warner Corp., Chicago, Ill.

INOXCO — Welding and cutting equipment and flame cutting machines. Industrial Oxygen Co., Louisville, Ky.

INPACTOOL — Electric tool. Ingersoll-Rand Co., New York, N. Y.

INSOROD — Self hardening alloy. Resisto-Loy Co., Grand Rapids, Mich.

INSUL-LOCK — Cable splice. Victor Equipment Co., San Francisco, Cal.

INTENSARC—Carbon arc welding electrodes. National Carbon Co., Inc., New York, N. Y.

INVARO — Oil-hardening tool steel. Firth-Sterling Steel Co., McKeesport, Pa.

IPCO — Safety equipment. Included are helmets, goggles, hoods, gloves, electrode holders, chrome leather protective clothing (suits, aprons, sleeves, spats, etc.). Industrial Products Co., Philadelphia, Pa.

IRONLUNG — Roof ventilation. Powermatic Ventilator Co., Cleveland, Ohio.

IRPO — Rust proofer or preventative. Wolfe-Kote Co., Inc., Sheboygan, Wis.

ISCO — Walnut caustic potash. Innis, Speiden & Co., New York, N. Y.

ISOROD—Forgeable self-hardening alloy. Resisto-Loy Co., Grand Rapids, Mich.

J

JM—Sodium silicate. E. I. duPont de Nemours & Co., Inc., Wilmington, Del.

J. S. CHISEL AND PUNCH STEEL — Oil-hardening punch-and-chisel steel. Firth-Sterling Steel Co., McKeesport, Pa.

JACKHAMER — Rock drill. Ingersoll-Rand Co., New York, N. Y.

JACKSON — Insulated and semi-insulated electrode holders and a complete line of adjustable eyeshields and hoods. Jackson Products, Detroit, Mich.

JARVIX BIAX — Flexible shafting, flexible shaft machines, and portable grinding machines with flexible shafts. Charles L. Jarvis Co., Middletown, Conn.

JARVIS POWER TOOLS — Flexible shaft equipment and flexible shaft tools and tapping attachments. Charles L. Jarvis Co., Middletown, Conn.

JAY BEE — Fire brick. Mexico Refractories Co., Mexico, Mo.

JEMCO — Flexible shaft machine. Jefferson Engineering & Mfg. Co., Detroit, Mich.

JEMCO "C40" — Hard facing rods. Armite Laboratories, Los Angeles, Cal.

JESSOP STAINLESS-CLAD — Stainless steel. Jessop Steel Co., Washington, Pa.

JEWEL — Line of pipe welding tools such as pipe clamps, tube turn clamps, angle clamps and pipe markers. The Jewel Mfg. Co., St. Paul, Minn.

JEWEL — Coated abrasives. Abrasive Products, Inc., South Braintree, Mass.

JEWEL BRAND — Coated abrasive. Abrasive Products, Inc., South Braintree, Mass.

JEWEL BRAND WELDISK—Aluminum oxide coated abrasive disc. Made by Abrasive Products, Inc., S. Braintree, Mass.

JEWELOX — Coated abrasive in rolls, belts, disc and sheet form. Abrasive Products, S. Braintree, Mass.

JIFFY — Acetylene soldering torches and equipment. Modern Engineering Co., Inc. St. Louis, Mo.

JOMAC—Flame proof gloves. C. Walker Jones Co., Philadelphia, Pa.

JONES — Abrasive belt swing grinder. Jones Engineering Co., Ellwood City, Pa.

JORGENSEN — Steel bar clamps. Adjustable Clamp Co., Chicago, Ill.

JUMBO — Machine cutting torch and tips. Harris Calorific Co., Cleveland, Ohio.

JUMBO — Round file type spark lighter. Harris Calorific Sales Co. of New York, New York, N. Y.

JUMBO — Torch lighters. Flint Products Co., Brooklyn, N. Y.

K

K-G — Welding and cutting torches, accessories, supplies, regulators, etc. K-G Welding & Cutting Co., New York, N. Y.

K MONEL — High strength non-magnetic form of Monel. The International Nickel Co., Inc., New York, N. Y.

KR MONEL — High carbon nickel, copper, aluminum alloy. International Nickel Co., Inc., New York, N. Y.

KAM KLAMPS — Pressure clamps for use on jigs and fixtures. Knu-Vise, Inc., Detroit, Mich.

KANDEL — Arc-oxygen electric underwater cutting torch. Craftsweld Equipment Corp., Long Island City, New York.

KANOX — Acetylene and oxygen. Kansas Oxygen Division, Hutchinson, Kan.

KASIL — Potassium silicate used for welding rod coatings. Philadelphia Quartz Co., Philadelphia, Pa.

KEEN-ARC—Copper coated and cored carbon electrodes. Becker Bros. Carbon Co., Cicero, Ill.

KELEKET — X-ray equipment. Kelley-Koett Mfg. Co., Covington, Ky.

KELLER — Pneumatic tools. Keller Tool Co., Grand Haven, Mich.

KELLERFLEX — Flexible shaft equipment. Pratt & Whitney (Division Niles-Bement-Pond Co.), W. Hartford, Conn.

KELLEY-KOETT — X-ray equipment, accessories and supplies. Kelley-Koett Mfg. Co., Inc., Covington, Ky.

KELLOG AMERICAN — Air compressors; spray guns and paint spray equipment exhaust units regulators. Kellogg Division of American Brake Shoe Co., Rochester, N. Y.

KERK-ALOY — Hard-facing alloy. Kerk-Aloy Co., Bloomington, Ind.

KEROTEST — Steel gate valves. Kerotest Manufacturing Co., Pittsburgh, Pa.

KESTER — Solders and fluxes. Kester Solder Co., Chicago, Ill.

KEYSTONE — Tungsten chisel steel. Henry Disston & Sons, Inc., Tacony, Phila., Pa.

KEYSTONE — Electrode holder. F. R. Faulk, Pittsburgh, Pa.

KEYSTONE — Lubricants. Keystone Lubricating Co., Philadelphia, Pa.

KIDDIE — Fire extinguishers and systems. Walter Kiddie & Co., Inc., Belleville, N. J.

KIMBALL — Weldors' aprons, gloves, goggles, helmets, leather suits, leggings, sleeves, metal arm protectors, sweat pads, lens and cover plates. Kimball Safety Products Co., Cleveland, Ohio.

KIRKSITE A — Die metal alloy. Morris P. Kirk & Son, Inc., Los Angeles, Cal.

KLAMPACTO — Quick acting toggle type "C" clamp. Knu-Vise, Inc., Detroit, Mich.

KLEANAIR — Respirators. Safety Equipment Service Co., Cleveland, Ohio.

KLEANROL—Soldering flux. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

KLEANWELD — Fluxes for aluminum castings, cast iron, brass and bronze welding of malleable iron, brass or bronze welding of cast iron. K-G Welding & Cutting Co., Inc., New York, N. Y.

KLEARSITE KOVERGLAS — Non-pitting coverglass for arc welding hoods, and welding goggles. Carter-Lockard Co., Los Angeles, Cal.

KLEN-ZINC — Flux for zinc and zinc alloys. Pittsburgh Metals Purifying Co., Pittsburgh, Pa.

KLING — Shears and presses. Kling Bros. Engineering Works, Chicago, Ill.

KNOCK-OUT — A-C arc welders, arc torches, electrodes, electrode holders. K. O. Lee Co., Aberdeen, S. D.

KNOLES — Trucks and cylinders. Adams Mfg. & Supply Co., Los Angeles, Cal.

KNU-LOK — Toggle type pliers. Knu-Vise, Inc., Detroit, Mich.

KNU-SINE — Hanging base clamp. Knu-Vise, Inc., Detroit, Mich.

KNU-VISE—Toggle clamps and pliers. Lapeer Manufacturing Co., Lapeer, Mich.

KOCH — Goggle head band. Koch Welding Works, Los Angeles, Cal.

KODAK INDUSTRIAL X-RAY FILMS — X-ray film. Eastman Kodak Co., Rochester, N. Y.

KODAK X-RAY FILM DEVELOPERS — Film processing solutions. Eastman Kodak Co., Rochester, N. Y.

KODAK X-RAY FILM FIXERS — Film Fixers in powder and liquid forms. Eastman Kodak Co., Rochester, N. Y.

KODAK INDUSTRIAL INTENSIFYING SCREENS — Screens to increase the effect of the x-radiation. Eastman Kodak Co., Rochester, N. Y.

KODAK TRANSFAX SPRAY—Solution which working drawings can be printed directly on metal. Eastman Kodak Co., Rochester, N. Y.

KOLDPOINT — Electrode cooling system. The American Electric Fusion Corporation, Chicago, Ill.

KOOLPORE — Grinding wheels Bay State Abrasive Prod. Co., Westboro, Mass.

KOP-R-ARC — Coated copper electrode. Krembs & Co., Chicago, Ill.

KOPPER KORE — Electric soldering iron. Kwikheat Mfg. Co., Glendale, Calif.

KORN — Leathers. Korn Leather Co., Peabody, Mass.

KRAFTGUARD — Goggles Chicago Eye Shield Co., Chicago, Ill.

KRE-CO — Welding and brazing fluxes. Charles W. Krieg Co., Newark, N. J.

KRESS-McKNEAT — Oil and gas burning appliances, preheaters, forges, torches, and furnaces. H. H. Kress, Philadelphia, Pa.

KROME-KOTE — Rust remover and sealer. Wolfe-Kote Co., Inc., Sheboygan, Wis.

KROMEWELD — Flux for welding stainless steels and stainless iron. Air Reduction Sales Co., New York, N. Y.

KROMOX — Chrome nickel steel rod for oxy-acetylene welding. Central Steel & Wire Co., Chicago, Ill.

KUT-KWIK—High speed steel. Henry Disston & Sons, Inc., Tacony, Philadelphia, Pa.

KUT-MOR — Portable motor driven gas cutting machine. Gaso Equipment Co., Chicago, Ill.

KWIKFLUX — Flux for hard soldering, brazing, or welding. Special Chemicals Co., New York, N. Y.

KWIK-HEAT — Electric soldering iron. Kwikheat Mfg. Co., Glendale, Calif.

KWIK-HEAT "TYPE 400"—Electric soldering iron. Kwik-heat Mfg. Co., Glendale, Calif.

KWIK-KLAMP — Adjustable clamp. Danly Machine Specialties, Inc., Chicago, Ill.

L

L NICKEL — Low-carbon form of nickel. International Nickel Co., Inc., New York, N. Y.

L. A. ALUMINUM BRAZING FLUX TYPE 1 — Aluminum brazing flux. Canadian Liquid Air Co., Ltd., Montreal, Canada.

L-T-B-50 — Plastic head rest spectacle. Jackson Products Co., Detroit, Mich.

LWZ — Line arc magnetic contractors. The Electric Controller & Manufacturing Co., Cleveland, Ohio.

LARKIN—A-C welders. Resistance spot, butt, seam, flash and projection welders and gun welders, arc torch, welder's protective cloth and accessories. Larkin Lectro Products Corp., New York, N. Y.

LARSEN — Round file or automatic types of spark lighter. Matchless Utilities Co., Brooklyn, N. Y.

LAY-RITE — Hard surfacing metal. Eld Metal Co., Ltd., Los Angeles, Calif.

LAY-SET — Wire rope. Hazard Wire Rope Div. of Amer. Chain & Cable Co., Inc., Wilkes Barre, Pa.

LECTRO - SHEAR — Electrically operated shear. Black and Decker Mfg. Co., Towson, Md.

LEDLOY — Lead bearing, open hearth steel. Inland Steel Co., Chicago, Ill.

LEJAY — D-C arc welders and electric brazing outfits. Lejay Mfg. Co., Minneapolis, Minn.

LENAPE RED MAN — Seamless forged welding necks, sweep type boiler nozzles, elliptical handhole and manhole saddles, rings and fittings, special press-formed members for welded constructions in pressure vessels, machinery and transportation equipment. Lenape Hydraulic Pressing & Forging Co., West Chester, Pa.

LEWIS — Wire straightening and cutting machines. The Lewis Machine Co., Cleveland, Ohio.

LIBERTY — Fibre welding helmet. Welding Engineering Corp., Milwaukee, Wis.

LICHTMAN — Leather for welder's clothing. J. Lichtman & Sons, Newark, N. J.

LIFETIME — Sheet, plate, wire, rod, bar, structural shapes, extrusions, tubing, aluminum products, etc. Reynolds Metals Co., Louisville, Ky.

LIFETIME — Welding and cutting torches. Smith Welding Equipment Corp., Minneapolis, Minn.

LIFT-FRONT — Welder's goggle. American Industrial Safety Equipment Co., Brooklyn, N. Y.

LIGHTWELD — Welding electrode. Lincoln Electric Co., Cleveland, Ohio.

LIN-DE-SURFACER — Machines for the mechanized oxy-acetylene conditioning of steel. The Linde Air Products Co., New York, N. Y.

LINCOLN — Electric arc welding equipment. The Lincoln Electric Co., Cleveland, Ohio.

LINCOLN ELECTRODE HOLDERS — Electrode holders. The Lincoln Electric Co., Cleveland, Ohio.

LINCOLN GROUND CLAMPS — Ground clamps. Lincoln Electric Co., Cleveland, Ohio.

LINCOLN HIGH VISIBLITY — Welding glass for electric arc welding. The Lincoln Electric Co, Cleveland, Ohio.

LINCOLN PROTECTIVE SHIELD — Leak-proof head shields. The Lincoln Electric Co., Cleveland, Ohio.

LINCONTROL — A foot operated welding control. Lincoln Electric Co., Cleveland, Ohio.

LINCWELDER — A-C welder. The Lincoln Steel Co., Coatesville, Pa.

LINDE — Liquid air, oxygen, hydrogen, nitrogen and rare gases automatic barrel welding machines; oxy-acetylene steel-conditioning machines; oxygen regulators. The Linde Air Products Co., New York, N. Y.

LINE-ARC — Magnetic contactors. Electric Controller & Mfg. Co., Cleveland, Ohio.

LINKEM — Cable connectors. Major Products Co., Des Moines, Iowa.

LITECOTE — Mild steel electrode. Harnischfeger Corp., Milwaukee, Wis.

LITE-NING — Carbon-arc torch. Cesco Products, Inc., Chicago, Ill.

LITTLE DAVID — Arc welding electrode holder. Lacey-Webber Co., Kalamazoo, Mich.

LITTLE GIANT — Pneumatic chipping hammer. The Dallett Co., Philadelphia, Pa.

LITTLE GIANT — Die stock sets. Greenfield Tap & Die Corp., Greenfield, Mass.

LITTLE PAL — Portable acetylene generator. Modern Engineering Co., Inc., St. Louis, Mo.

LIVE LINE — Ground clamp. Railway & Industrial Engineering Co., Greensbury, Pa.

LLOYD'S SOLDERING FLUX — Soldering fluids. Johnson Mfg. Co., Inc., Mount Vernon, Iowa.

LLOYD'S No. 7 FLUX — Hard solder flux. Lloyd S. Johnson Co., Chicago, Ill.

LLOYD'S NO. 6 SOLDERING FLUID — Soldering flux. Lloyd S. Johnson Co., Chicago, Ill.

LOAD KING — Electric hoist. The Yale & Towne Mfg. Co., Philadelphia, Pa.

LOAD LIFTER — Wire rope type electric hoists. Manning, Maxwell & Moore, Inc., Muskegon, Mich.

LOCKLITE — Welding goggles. Carter-Lockard Co., Los Angeles, Cal.

LO-CRO — Electrodes for chromium steel. Crucible Steel Co. of America, New York, N. Y.

LO-FLO — Silver solders. Goldsmith Bros. Smelting and Refining Co., Chicago, Ill.

LO-MELT COPPER — Phos-copper alloy. Canadian Liquid Air Co., Ltd., Montreal, Que., Canada.

LOCKWELD — Welding electrodes. Larkin Lectro Products Corp., Brooklyn, N. Y.

LO-MAINTENANCE — Electric motors and motor control. Allis Chalmers Mfg. Co., Milwaukee, Wis.

LONG-LIFE — Protective and working gloves. Standard Safety Equipment Co., Chicago, Ill.

LOOKS — Goggles. Mine Safety Appliances Co., Pittsburgh, Pa.

LOW TEMPERATURE WELDING ALLOYS — Welding rods. Eutectic Welding Alloys Corp., New York, N. Y.

LUKENS NICKEL-CLAD — Nickel-clad steel. Lukens Steel Co., Coatesville, Pa.

LUKENWELD — Steel plate products. Lukens Steel Co., Coatesville, Pa.

LUMINARC — Flux coated, aluminum welding electrode. Universal Welding Corp., Cleveland, Ohio.

LUXIFLUX — Nonoxidizing corrective flux. Special Chemicals Co., New York, N. Y.

LYON — Welding benches and tables. Lyon Metal Products., Inc., Aurora, Ill.

LYON — Hydraulically operated welding positioner. Lyon-Raymond Corp., Greene, N. Y.

LYTESTONE SOLDERING FLUX — Flux. Farrelloy Co., Philadelphia, Pa.

M

M-22 — Fire brick. Mexico Refractories Co., Mexico, Mo.

M-23 — Fire brick. Mexico Refractories Co., Mexico, Mo.

MMM — Coated abrasive, adhesives, masking tape, etc. Minnesota Mining and Mfg. Co., St. Paul, Minn.

MO-FOG — Non-fogging compound. Carhoff Co., Cleveland, Ohio.

MSA — Welding helmets, protective hats, coated covered glass, airline respirators, goggles, first aid kits, fire blankets, welders' leather clothing, welders' ear protectors, gas detectors and indicators and metal fume respirators. Mine Safety Appliances Co., Pittsburgh, Pa.

MSA-LAMB — Venturi type air-venting apparatus. Mine Safety Appliances Co., Pittsburgh, Pa.

M & T — Electrodes and welding rod and welding supplies. Metal & Thermit Corp., New York, N. Y.

M/W — Welding and cutting equipment, welding rods, electrodes, accessories and supplies. Machinery and Welder Corp., Chicago, Ill.

MW-50 — Insulating Cement. The Philip Carey Mfg. Co., Lockland, Cincinnati, Ohio.

M/W ALUMINUM — Gas welding wire. Machinery & Welder Corp., Chicago, Ill.

M/W 95-5 ALUMINUM (DRAWN) — Welding rod. Machinery & Welder Corp., Chicago, Ill.

M/W CAST ALUMINUM — Alloy rod. Machinery & Welder Corp., Chicago, Ill.

M/W HARDSURF—Hard surfacing electrodes. Machinery & Welder Corp., Chicago, Ill.

M/W HEAVY-COATED ALUMINUM — Arc welding electrode. Machinery & Welder Corp., Chicago, Ill.

M/W LOW-FUMING BRONZE, No. 997 — Welding rod. Machinery & Welder Corp., Chicago, Ill.

M/W MANGANESE BRONZE — Alloy for welding of cast, malleable iron, steel, wrought, galvanized iron, brass, copper. Machinery & Welder Corp., Chicago, Ill.

M/W NICMAN — Bare or coated electrodes. Machinery & Welder Corp., Chicago, Ill.

M/W PHOSPHOR BRONZE — Coated electrode. Machinery & Welder Corp., Chicago, Ill.

MACKLIN — Abrasive grinding wheels. Macklin Co., Jackson, Mich.

MACLEOD — Fans and burners, etc. The Macleod Co., Cincinnati, Ohio.

MACO — Abrasion and corrosion resistant alloy castings. McCauley Alloy Co., Steger, Ill.

MACALOY — Phosphide brazing and welding alloys. McCauley Alloy Company, Steger Illinois.

MACALOY B-C — Hard surfacing rods. McCauley Alloy Sales Co., Chicago, Ill.

MACALOY E-F-G — Brazing rods. McCauley Alloy Sales Co., Chicago, Ill.

MAGBOND — Colloidal gelatinous binder and lubricant. Foote Mineral Co., Philadelphia, Pa.

MAGIC WAND — Portable A-C arc welder. Patent Specialties, Inc., New York, N. Y.

MAG-NA FLO — Flux gas welding of magnesium. Park Stewart, Worthington, Pa.

MAGNAFLUX — Powder, paste and equipment. Magnaflux Corp., Chicago, Ill.

MAGNA-TONE NM — Manganese steel rebuilding alloy. Resisto-Loy Co., Grand Rapids, Mich.

MAGNETRODE — Magnetic grounding contact for arc welding. Scott Manufacturing Co., Kansas City, Mo.

MAGNOLIA — Babbitt metals. Magnolia Metal Co., Elizabeth, N. J.

MAGNOLIA — Welding and cutting equipment, accessories, supplies, etc., Air Reduction Sales Co., New York, N. Y.

MAJAR — Arc welding cable. Welding Engineering Corp., Milwaukee, Wis.

MAHR — Oil burning preheating torches, oil, gas and electric industrial furnaces and equipment. Mahr Mfg. Co., Minneapolis, Minn.

MAINLINE — Welding electrode holder service kit. Moorewood Electric & Mfg. Co., Milwaukee, Wis.

MAJOR — Rubber covered welding cable. Welding Engineering Co., Milwaukee, Wis.

MAJOR — Cable for welders. Borm Mfg. Co., Elgin, Ill.

MALGAM — Bronze bar stock. Magnolia Metal Co., Elizabeth, N. J.

MALL — Flexible shaft equipment and portable power tools. Mall Tool Co., Chicago, Ill.

MALL DRILS — Portable electric drills. Mall Tool Co., Chicago, Ill.

MALL POLISHER — Portable electric polishers. Mall Tool Co., Chicago, Ill.

MALLSAWS — Portable electric saws. Mall Tool Co., Chicago, Ill.

MALLORY 3—Heat treatable copper base alloy. P. R. Mallory & Co., Inc., Indianapolis, Ind.

MALLORY 100 — Hardening copper base alloy. P. R. Mallory & Co., Inc, Indianapolis, Ind.

MALLORY 53-B — Heat treatable copper base alloy. P. R. Mallory & Co., Inc., Indianapolis, Ind.

MALLORY 73 — Hardening copper base alloy. P. R. Mallory & Co., Inc., Indianapolis, Ind.

MANGALOY—Build-up electrodes. Bergstrom Alloys Corp., Reno, Nevada.

MANGAMOL — Shielded arc manganese electrode. Hobart Brothers Co., Troy, Ohio.

MANGANAL — Welding electrodes for A-C and D-C welding. Stulz-Sickles Co., Newark, N. J.

MANGANARC — Manganese electrodes and welding rods. Universal Welding Corp., Cleveland, Ohio.

MANGANEND 13 — Electrodes for welding manganese nickel steels. Arcos Corp., Philadelphia, Pa.

MANGANEND 2M — Alloy manganese-molybdenum electrode. Arcos Corp., Philadelphia, Pa.

MANGANICK — Cold-drawn and heat treated electrode. Hobart Brothers Co., Troy, Ohio.

MANGANOX — Brown manganese oxide. Foote Mineral Co., Philadelphia, Pa.

MANGANOX — Manganese combined with a nickel content and a high percentage of carbon steel rod for arc welding. Central Steel & Wire Co., Chicago, Ill.

MANGANWELD — Welding electrodes. The Lincoln Electric Co., Cleveland, Ohio.

MANGA-TONE NM — Alloyed rod. Resisto-Loy Co., Grand Rapids, Mich.

MANHATTAN — Synthetic bonded abrasive polishing wheels. The Manhattan Rubber Mfg. Div., Raybestos-Manhattan, Inc., Passaic, N. J.

MANKOTE — Flux coated high manganese rod. Central Steel & Wire Co., Chicago, Ill.

MANSIL — Non deforming oil hardening tool steel. Henry Disston & Sons., Inc., Tacony, Philadelphia, Pa.

MANSON — Friction tape. The Okonite Co., Passaic, N. J.

MAN-TEN (USS) — Steel. United States Steel Subsidiaries, Pittsburgh, Pa

MARKAL — Paint sticks. Markal Co., Chicago, Ill.

MARQUETTE — A-C arc welders of the transformer type Marquette Manufacturing Co., Inc., Minneapolis, Minn.

MARQUETTE ARC TORCH — Attachment for A-C and D-C welders to produce independent welding and heating flame. Marquette Manufacturing Co., Inc., Minneapolis, Minn.

MARSTWELD — Swedish Marten soft steel welding wire. Swedish Iron and Steel Corp., New York, N. Y.

MAR-TEMP — Heat treating salt. E. F. Houghton & Co., Philadelphia, Pa.

MARTIN — Automatic welding machines, portable gun welders, spot projection type welding machines, welding transformers and welding cable. Martin Electric Co., Detroit, Mich.

MARVEL — Portable blowers, exhaust blowers, forge blowers, and ventilating fans. Electric Blower Co., Boston, Mass.

MARVEL — Brazing fluxes. Air Reduction Sales Co., New York, N. Y.

MASTER — Wire wheel brushes. The Osborn Manufacturing Co., Cleveland, Ohio.

MASTER MECHANIC KIT — Welding and cutting outfits. Burdett Oxygen Co., Cleveland, Ohio.

MASTER POWER—Portable pneumatic grinders. Master Pneumatic Tool Co., Inc., Cleveland, Ohio.

MATCHLESS — Automatic spark lighter. Matchless Utilities Co., Brooklyn, N. Y.

MAURATH — Flux-coated alloy-steel electrodes. Maurath, Inc., Cleveland, Ohio.

MAYARI R — Low alloy high strength steel. Bethlehem Steel Co., Bethlehem, Pa.

MAYHEW — Mechanics hand tools. Mayhew Steel Products, Inc., Shelburne Falls, Mass.

MAZLO — Welding rods. American Magnesium Corp., Cleveland, Ohio.

McCABE — Pneumatic flanging machines. McCabe Mfg. Co., Lawrence, Mass.

McCLARY — Electrode holders. McClary & Buyers Equipment Co., Oakland, Calif.

McKAY — Shielded arc welding electrodes. The McKay Co., Pittsburgh, Pa.

McKAY — Valves for high pressure gas cylinders. Linde Air Products Co., New York, N. Y.

MECHANICS PROTECTOR — For pipe and sheet metal layout work. Interstate Sales Co., New York, N. Y.

MECHANICS ROLLS—Aluminum oxide cloth rolls. Clover Manufacturing Co., Norwalk, Conn.

MECHANI-CUTS — Power hack saws. Peerless Machine Co., Racine, Wis.

MECO — Welding and cutting apparatus and supplies, accessories, preheating torches, acetylene generators, electric welding accessories, etc. Modern Engineering Co., St. Louis, Mo.

MEC-CON — Full mechanical detachable type cable connector. Tweco Products Co., Wichita, Kans.

MECH MASTER — Toggle clamps. Mechanics Engineering Co., Jackson, Mich.

MEEHANITE — Sorbo-pearlitic iron. Meehanite Metal Corp., New Rochelle, N. Y.

MELTOMATIC — Paste form of solder. Wayne Chemical Products Co., Detroit, Mich.

MESTA-THOMSON-GIBB — Flash welder. Mesta Machine Co., Pittsburgh, Pa.

METAL-BOND — Compounds, fluxes and alloys for welding, brazing and soldering. Metal Bond Mfg. Co., St. Louis, Mo.

METAL BOND 10—Brazing flux. Metal Bond Mfg. Co., St. Louis, Mo.

METAL BOND 20 — Brazing flux. Metal Bond Mfg. Co., St. Louis, Mo.

METAL BOND 31 — Brazing flux. Metal Bond Mfg. Co., St. Louis, Mo.

METAL MARK—Metal marking crayons. The American Crayon Co., Sandusky, Ohio.

METALITE — Aluminum oxide coated abrasive. Behr-Manning Corp., Troy, N. Y.

METALITE — Hard facing rod. Adams Alloy Co., Wakita, Okla.

METALKLAD — Arc welding lens. American Agile Corp., Cleveland, Ohio.

METALLIZER — Gun for spraying surfaces with metal. Metallizing Co. of America, Inc., Chicago, Ill.

METAL MASTER — Welder. Clinton Machine Co., Clinton, Mich.

METALSPRAY — Metal spraying gun, also metal spraying equipment. Metalspray Co., Inc., Los Angeles, Cal.

METCO — Metallizing guns and equipment. Metallizing Engineering Co., Long Island City, N. Y.

METCOLITE — Non-metallic abrasive Metallizing Engineering Co., Inc., Long Island City, N. Y.

METCOLOY — Stainless steel. Metallizing Engineering Co., Inc., Long Island City, N. Y.

METCOSEAL — Sealer. Metallizing Engineering Co., Long Island City, N. Y.

METCO-WELD — Metallizing wire. Metallizing Engineering Co., Long Island City, N. Y.

METEOR — Electric hoist. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.

METRO — Welding helmets, hand shields, goggles, cutting and welding torches and accessories. Metro Manufacturing Co., Long Island City, N. Y.

METRON — Spot welders. Metron Instrument Co., Denver, Colo.

METROWELD — Welding fluxes. Metro Mfg. Co., Long Island City, N. Y.

METSO — Sodium metasilicate and sodium sesquisilicate cleaners for stainless steels. Philadelphia Quartz Co., Philadelphia, Pa.

METWELD — Welding and cutting torches, accessories, supplies, acetylene generators and arc welders. Welding Metals Mfg. Co., E. Detroit, Mich.

MEX-R-CO LO-SET — Bonding mortar. Mexico Refractories Co., Mexico, Mo.

MEX-R-CO HY-SET — Bonding mortar. Mexico Refractories Co., Mexico, Mo.

MEXURALL — Tape rules. The Lufkins Rule Co., Saginaw, Mich.

MICHEL — Weld-timer. The Central Sales Corp., Chicago, Ill.

MICROPOISE — Balancing machines. Commerce Pattern Foundry & Machinery Co., Detroit, Mich.

MICRO-SPRAY — Paint gun. Kellogg Division of American Brake Shoe Co., Rochester, N. Y.

MICRO-WELD — Electric butt and spot welding machines. Micro Products Co., Chicago, Ill.

MIDGET — Spot and butt welders. Universal Welder Corp., Cleveland, Ohio.

MIDGET KING — Electric hoist. The Yale & Towne Mfg. Co., Philadelphia, Pa.

MIDWEST — Fabricated piping, and pipe welding fittings. Midwest Piping and Supply Co., St. Louis, Mo.

MIGHTY-MIDGET — Portable acetylene generators. John R. R. Miles, Inc., Minneapolis, Minn.

MIKALOID — Plastic goggles. Burdett Oxygen Co., Cleveland, Ohio.

MILBURN — Oxy-acetylene welding and cutting equipment and accessories. The Black Mfg. Co., Baltimore, Md.

MILES — Portable welding and cutting torches, regulators, acetylene generators. John R. R. Miles, Inc., Minneapolis, Minn.

MILLER — D-C welding generators; carbon arc torches; A-C arc welders; D-C arc welders; engine driven arc welders; inert gas shielded arc welders; inert gas welders; spot welders and electrode holders. Miller Electric Manufacturing Co., Appleton, Wis.

MILLER — A-C arc welders. Miller Electric Manufacturing Co., Appleton, Wis.

MILLER REACTANCE ARC — A-C electric arc welders. Miller Electric Mfg. Co., Inc., Appleton, Wis.

MILLERS FALLS — Hand tools. Millers Falls Co., Greenfield, Mass.

MINIATURE WELD-POWER — Bench type spot welder. Industrial Electronic Division, Raytheon Mfg. Corp., Waltham, Mass.

MINUTE MAN — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

MIR-O-COL — Hard-facing welding rods and electrodes. Mir-O-Col Alloy Co. Los Angeles, Cal.

MISCO METAL — Electrodes. Michigan Steel Casting Co., Detroit, Mich.

MISCO B — Electrodes. Michigan Steel Casting Co. Detroit, Mich.

MISCO C — Electrodes. Michigan Steel Casting Co., Detroit, Mich.

MISCO K — Electrodes. Michigan Steel Casting Co., Detroit, Mich.

MISENER — Hole saws. Misener Manufacturing Co., Inc., Syracuse, N. Y.

MISSING LINK — High frequency atomic arc unit. Mid-States Equipment Co., Chicago, Ill.

MIXEND — Monel metal covered electrode. Arcos Corp., Philadelphia, Pa

MODEL — Hose. Mulconroy Co., Philadelphia, Pa.

MODEL G — Pneumatic scaling hammers. Borm Manufacturing Co., Elgin, Ill.

MODEL K — Portable motor driven cutting machine. Harris Calorific Co., Cleveland, O.

MODEL T-11 — Twin carbon torch. Twentieth Century Manufacturing Co., Minneapolis, Minn.

MODEL W-1 — Electric brazing torch. Borm Manufacturing Co., Elgin, Ill.

MODIC L — Cable connectors. Wagner Manufacturing Co., Inc., Jackson, Mo.

MOGUL — High speed steel. Jessop Steel Co., Washington, Pa.

MOGUL — Gun for spraying surfaces with metal. Metallizing Co. of America, Inc., Chicago, Ill.

MOLEX — Coated arc welding electrode. Metal & Thermit Corp., New York, N. Y.

MOLY-C-ALLOY — Alloy steel electrode. Anthony Carlin Co., Cleveland, Ohio.

MOLY-IRON — Iron-molybdenum alloy. Weatherly Foundry and Manufacturing Company, Weatherly, Pa.

MOLY-NICKEL CAST IRON — Cast iron rod. Steel Sales Corp., Chicago, Ill.

MOLY-RODS—MOLY H—Alloy cast iron rods and for hard surfacing rods. Chicago Hardware Foundry Co., No. Chicago, Ill.

MONARCH — Welding helmets and hand shields. Fibre-Metal Products Co., Chester, Pa.

MONARCH—Welding lens. Welding Engineering Corp., Milwaukee, Wis.

MONARCH — Cutting torch. Harris Calorific Co., Cleveland, Ohio.

MONEL — Nickel-copper alloy. The International Nickel Co., Inc., New York, N. Y.

MONEL-CLAD STEEL — Bi-metal plate composed of a layer of solid Monel bonded to a heavier backing plate of steel. Lukens Steel Co., Coatesville, Pa.

MONELITE — Goggles. Dockson Corp., Detroit, Mich.

MONEND — Welding electrode, electrodes for welding Monel. Arcos Corp., Philadelphia, Pa.

MONEY-MAKER — Welding and cutting equipment. Modern Engineering Co., Inc., St. Louis, Mo.

MONITOR — Portable oxy-acetylene cutting machine. The Linde Air Products Co., New York, N. Y.

MONITOR—Wire wheel brushes. The Osborn Mfg. Co., Cleveland, Ohio.

MONO FIBRIK — Fire brick. Mexico Refractories Co., Mexico, Mo.

MONO-SEAT — Pressure regulator. Modern Engineering Co., Inc., St. Louis, Mo.

MO-REX — Fire brick. Mexico Refractories Co., Mexico, Mo.

MOREY — Fluxes, welding rods and electrodes. Morey Flux & Chemical Co., Wilmington, Del.

MORSE — Small cutting tools. Morse Twist Drill & Machine Co., New Bedford, Mass.

MOR-WELD — Arc welding electrode holders. Moorewood Electric & Mfg. Co., Los Angeles, Cal.

MOR-WELD—Welding rods, electrodes, welding accessories, etc. Morris, Wheeler & Co., Inc., Philadelphia, Pa.

MOSLO — Equipment used in the manufacture of arc welding electrodes. Moslo Machinery Co., Cleveland, Ohio.

MOTO SAW — Portable electric jig saw. Dremel Manufacturing Co., Racine, Wis.

MOTO TOOL — Portable electric hand tool. Dremel Manufacturing Co., Racine, Wis.

MOULDOUGH — Backing up material. Metal Bond Mfg. Co., St. Louis, Mo.

MULSINE — Metals and parts cleaner. Turco Products, Inc., Los Angeles, Cal.

MULSIREX—Metals and parts cleaner. Turco Products, Inc., Los Angeles, Cal.

MULTI-FLAME — Torch head. The Linde Air Products Co., New York, N. Y.

MULTI-FLEX — Carbon motor and generator brushes. Speer Carbon Co., St. Marys, Pa.

MULTI-HYDROMATIC — Spot; projection; butt; flash; gun; seam; multiple spot welders; jigs and fixtures. Multi-Hydromatic Welding & Manufacturing Co., East Detroit, Mich.

MULTI-MAX — Punch and shear combined. Parker Mfg. Co., Santa Monica, Cal.

MULTI-PIC — Weld scaling hammer. Bernard Welding Equipment Co., Chicago, Ill.

MULTI-MET — Cast or wrought heat-resistant alloy. Haynes Stellite Co., New York, N. Y.

MULTI-SEAT — Pressure regulator. Modern Engineering Co., Inc., St. Louis, Mo.

MULTI-STAGE — Gas pressure regulators. The Harris Calorific Co., Cleveland, Ohio.

MULTIPLE UNIT — Heavy treating furnaces. Hevi Duty Electric Co., Milwaukee, Wis.

MUREX — Heavily all-mineral coated welding electrodes. Metal and Thermit Corp., New York, N. Y.

MURINE — Eye drops. The Murine Co., Inc., Chicago, Ill.

N

N-A-X — High tensile, low alloy steel. Great Lakes Steel Corp. Div., National Steel Corp., Ecorse, Detroit, Mich.

NCG — Air liquefaction oxygen and nitrogen plants, monolithic filled acetylene cylinders, oxygen, acetylene, hydrogen, nitrogen, CO_2 gases, and welding and cutting equipment and supplies, gas and electric welding rods and flux, power operated cutting machines. National Cylinder Gas Co., Chicago, Ill.

N BOROLON — Grinding wheels. Simonds Abrasive Co., Philadelphia, Pa.

NALCO — Aluminum flux and soldering flux. National Lead Co., New York, N. Y.

NAGELDINGER — Pressure regulating valves and regulators, medical oxygen apparatus, cylinder valves, cylinder manifolds, needle valve controls, welding and cutting equipment and safety valves. John Nageldinger & Son, Inc., New York, N. Y.

NAPOLITAN — Flux for welding sheet aluminum. Air Reduction Sales Co., New York, N. Y.

NATIONAL — Electric spot, seam, flash, butt and projection welding machines. National Electric Welding Machines Co., Bay City, Mich.

NATIONAL — Carbon and graphite welding electrodes; also for welding rods, plates and paste. National Carbon Company, Inc., New York, N. Y.

NATIONAL — Carbide. Air Reduction Sales Co., New York, N. Y.

NATIONAL — Weld timer. National Time & Signal Corp., Detroit, Mich.

NATIONAL — A-C arc welders, arc welding electrodes, gas welding rods, and gas and arc welding supplies. National Welders Supply Co., Charlotte, N. C.

NATIONAL — Gas welding and flame cutting torches, regulators and welding accessories. National Welding Equipment Co., San Francisco, Cal.

NATIONAL CYLINDER GAS — Air liquefaction oxygen and nitrogen plants, monolithic filled acetylene cylinders, oxygen, acetylene, hydrogen, nitrogen, CO_2 gases, and welding and cutting equipment and supplies, gas and electric welding rods and flux, power operated cutting machines. National Cylinder Gas Co., Chicago, Ill.

NATIONAL-INTERRUPTER TIMER — Regulating weld timer. National Time & Signal Corp., Detroit, Mich.

NATIONAL SIX CUT-O-MATIC — Portable flame cutting machine. National Cylinder Gas Co., Chicago, Ill.

NATIONAL-TIMER — Welding timer. National Time & Signal Corp., Detroit, Mich.

NATIONAL TYPE R — Motor driven, electrically controlled oxy-acetylene shape cutting machine. National Cylinder Gas Co., Chicago, Ill.

NAWSUCO — Leather welder's clothing. National Welders Supply Co., Charlotte, N. C.

NEAT-N-NIFTY — Self soldering tape. W. B. Franklin Co., San Francisco, Cal.

NELSON — Arc stud welder. Nelson Sales Corp., Lorain, Ohio.

NEMCO — Aluminum brazing, cast iron flux and spatter proof cover lens. Northeast Metals Co., Philadelphia, Pa.

NEMCO ALUMINUM FLUX—Non-hydroscopic flux. Northeast Metals Co., Philadelphia, Pa.

NEMCO WELD FILLER — Stick form, impervious coating. Northeast Metals Co., Philadelphia, Pa.

NEOPHAN — Welding lens. Fish-Schurman Corp., New York, N. Y.

NEOTROL — Electric controls, weld-timers. Electric Controller and Mfg. Co., Cleveland, Ohio.

NEOTROL-COMPENSATING — Weld timer. The Electric Controller & Manufacturing Co., Cleveland, Ohio.

NEW-ARC — Bare and flux coated electrodes, helmets, cables, accessories and electric arc welding supplies. Electric Arc Inc., Newark, N. J.

NEW DEAL — Arc welding hand shield. Welding Engineering Co., Milwaukee, Wis.

NEW ENGLAND — Welding apparatus. New England Gas Products, Inc., Charlestown, Mass.

NEW KATHODE—Mild steel, general purpose electrode. Lincoln Electric Co., Cleveland, Ohio.

NEW PROCESS—Hose. Mulconroy Co., Philadelphia, Pa.

NEWTON — Wooden mallets. Cortland Sales & Products, Inc., Cortland, Ohio.

NEW-WAY — Round file type spark lighter. Matchless Utilities Co., Brooklyn, N. Y.

NI-CASTWELD — Nickel, cast iron welding rod. Steel Sales Corp., Chicago, Ill.

NI-RESIST — Cast iron welding rod. Chicago Hardware Foundry Co., North Chicago, Ill.

NI-ROD — Welding electrode. International Nickel Co., Inc., New York, N. Y.

NIAGARA — Automatic electronic welding machines. Niagara Machine & Tool Works, Buffalo, N. Y.

NICASTOX — Nickel cast iron welding rod. Central Steel and Wire Co., Chicago, Ill.

NICHOLSON — Files. Nicholson File Co., Providence, R. I.

NICHROME—Nickel-chromium alloy welding rod. Driver-Harris Co., Harrison, N. J.

NICKEL — Nickel forms such as sheet, plate, strip, tubing, rod or wire. The International Nickel Co., New York, N. Y.

NICKEL — Alloy steel. The Babcock & Wilcox Tube Co., Beaver Falls, Pa.

NICKEL-ARC — Electrode. Alloy Rods Co., York, Pa.

NICKEL-CLAD — Bi-metal plate composed of a layer of solid nickel bonded to a heavier backing plate of steel. Lukens Steel Co., Coatesville, Pa.

NICKELCHROMEWELD — Shielded arc electrode. The Lincoln Electric Co., Cleveland, Ohio.

NICKELEND — Electrodes for welding nickel. Arcos Corp., Philadelphia, Pa.

NICKELMANG — Welding electrode for welding manganese steels. Westinghouse Electric Corp., E. Pittsburgh, Pa.

NICKELOID METALS — Nickel plated steel. American Nickeloid Co., Peru, Ill.

NICKEL STEEL — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

NICKEND "2"—Electrodes for welding nickel. Arcos Corp., Philadelphia, Pa.

NICKOX — Nickel steel rod. Central Steel & Wire Co., Chicago, Ill.

NICLOY — Tubing steels. The Babcock & Wilcox Tube Co., Beaver Falls, Pa.

NICO — Welding electrode. American Arc Welders, Inc., Roseau, Minn.

NICROMA — Oil hardening tool steel. Henry Disston & Sons, Inc., Tacony, Philadelphia, Pa.

NICUEND — D-C, reverse-polarity electrode. Arcos Corp., Philadelphia, Pa.

NIKROMOX — Stainless steel flux. Canadian Liquid Air Co., Ltd., Montreal, Canada.

NILES 1 — Fire clay brick. The Niles Fire Brick Co., Niles, Ohio.

NILES UTILITY — Silica cement. The Niles Fire Brick Co., Niles, Ohio.
98M2—Cutting tools. Haynes Stellite Co., New York, N. Y.
NIROSTA — Chrome-nickel stainless steels. Firth-Sterling Steel Co., McKeesport, Pa.
NIWELD — Cast iron welding. Crucible Steel Co. of America, New York, N. Y.
NO DUST — Dust collector and grinder. Hammond Machinery Builders, Inc., Kalamazoo, Mich.
NO-FOG — Compound to prevent fogging, steaming and frosting of goggles and other glass surfaces. Carhoff Co., Cleveland, Ohio.
NOGAS — Metal pickling agent. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
NO-SPAT — Compound to prevent the adherence of spatter. Midland Paint and Varnish Co., Cleveland, Ohio.
NO-WEAR — Cemented tungsten carbide hard-facing alloy. Callite Tungsten Corp., Union City, N. J.
NON-FLASH — Welding and cutting torches. Torchweld Equipment Division, National Cylinder Gas Co., Chicago, Ill.
NON-KINK — Welding hose. Boston Woven Hose & Rubber Co., Cambridge, Mass.
NONOX SWEDOX — Low carbon welding rods. Central Steel and Wire Co., Chicago, Ill.
NON PARELL — Wire rope Hazard Wire Rope Div. of American Chain and Cable Co., Inc., Wilkes Barre, Pa.
NORBIDE — Abrasive resistance nozzles for sand blast equipment. Norton Co., Worcester, Mass.
NORDSTROM — Plug valves. Merco Nordstrom Valve Co., Pittsburgh, Pa.
NORELCO—Contact welding electrode. North American Philips Co., Inc., New York, N. Y.
NORFLO — Electric and gas welding rod. Williams & Co., Inc., Pittsburgh, Pa.
NORFLOW — Electric welding wire. Williams & Co., Inc., Pittsburgh, Pa.
NORGREN — Regulating and reducing valves, relief valves, needle valves and cocks, hose couplings and fittings and other pneumatic products. C. A. Norgren Co., Denver, Colo.
NORTON—Abrasives used in grinding wheels for grinding and finishing welds, etc. Norton Co., Worcester, Mass.
NORWELD — Copper coated wire or welding rod. Steel Sales Corp., Chicago, Ill.
NORWELD SPECIAL — Copper coated wire. Steel Sales Corp., Chicago, Ill.
NOVIWELD — Glass for welding helmet and goggles. American Optical Co., Southbridge, Mass.
NOVIWELD-DIDYMIUM—Safety goggle lens. American Optical Co., Southbridge, Mass.
NO. 15 CHROME NICKEL — Stainless steel electrode. Metal & Thermit Corp., New York, N. Y.
NO. 16 GH — Stainless steel welding flux. Victor Equipment Co., San Francisco, Cal.
NO. 22 — Cast iron electrodes. Chicago Hardware Foundry Co., North Chicago, Ill.
NU-ARC — Transformer type welder. Electric Arc, Inc., Newark, N. J.
NUBON — Grinding wheels. Universal Wheel & Abrasive Corp., Chicago, Ill.
NU-BRAZE — Silver brazing alloys. Sherman & Co., New York, N. Y.
NU-BRAZE DIFFUSION BRAZING PASTE — Brazing alloys. Sherman & Co., New York, N. Y.
NU-BRAZE WONDER FLUX NO. 4 — Flux. Sherman & Co., New York, N. Y.
NUMBERED STOODITES — Cast hard-facing rods. Stoody Co., Whittier, Cal.
NuSTEEL — Stainless steel cleaner. NuSteel Co., Chicago, Ill.
NU-WAY — Flame equipped spark lighter. Matchless Utilities, Brooklyn, N. Y.
NYDRA-CUT — Power hack saws. Peerless Machine Co., Racine, Wis.
NYWSCO — Welding and cutting equipment and supplies. New York Welding Supply Co., New York, N. Y.

O

O-B — Rail bonds, electric arc welding machines, electrodes, electrode holders, helmets, face shields and accessories. Ohio Brass Co., Mansfield, Ohio.
O-B DUOWELD — Rail bonds. Ohio Brass Co., Mansfield, Ohio.
O-B DURON — Bare copper alloy electrode. Ohio Brass Co., Mansfield, Ohio.
O-B GAS WELDING ROD — Bare copper alloy filling rod. Ohio Brass Co., Mansfield, O.
O-B TITON — Rail bonds. Ohio Brass Co., Mansfield, Ohio.
OK — Grinder. Hammond Machinery Builders, Inc., Kalamazoo, Mich.
O.M.W. — Cutting machine. Ohmstede Machine Works, Beaumont, Texas.
OTC — Tools. Owatonna Tool Co., Owatonna, Minn.
OXCO — Oxygen and acetylene gases compressed in cylinders. Oklahoma Oxygen Co., Oklahoma City, Okla.
O-Z — Solderless lugs and connectors, heavy duty power connectors, corrosion resistant bolts, grounding fittings and welding terminal panels. O-Z Electrical Mfg. Co., Brooklyn, N. Y.
OAKITE — Chemical compounds. Oakite Products Co., Inc., New York, N. Y.
OBALLOY — Signal bonds. Ohio Brass Co., Mansfield, Ohio.
OCTOPUS — Welding; fume exhauster. Chelsea Fan & Blower Co., Inc., Irvington, N. J.
OCTOPUS JR. — Portable exhauster and blower. Chelsea Fan and Blower Co., Inc., Irvington, N. J.
OHIO — Bolts, nuts, brackets and kindred fastening devices. The Ohio Nut & Bolt Co., Berea, Ohio.
OHIO CARBON — Carbon brushes. Ohio Carbon Co., Cleveland, Ohio.
OHIOHM — Fixed carbon resistors, wire wound resistors. Ohio Carbon Co., Cleveland, Ohio.
OHIO QUALITY — Seamless and electric welded steel tubing. The Ohio Seamless Tube Co., Shelby, Ohio.
OHMITE—Resistance coils, rheostats, switches and similar equipment. Ohmite Mfg. Co., Chicago, Ill.
OKOCORD—Rubber-sheathed portable cable for electrical welding equipment. The Okonite Co., Passaic, N. J.
OKONITE — Rubber splicing tape. The Okonite Co., Passaic, N. J.
OLD FORGE — Chisels, pneumatic and hand; punches; hand tools and tool handles. Quality Tools Corp., New Wilmington, Pa.
OLD HICKORY — Welder's protective clothing. Industrial Gloves Co., Danville, Ill.
OLYMPIC BRONZE — Silicon bronze. Chase Brass & Copper Co., Waterbury, Conn.
OMICRON — Steel tape beam compasses for layout work. The Omicron Co., Glendale, Cal.
OPTIMUS — Pre-cleaner and deoxidizer. Optimus Detergents Co., Matawan, N. J.
ORANGE-STRIPE—Garnet papers and cloths. Clover Manufacturing Co., Norwalk, Conn.
OSAGE — Hard-facing rods. Osage Metal Co., Oklahoma City, Okla.
OSBORN — Industrial brushes suitable for weld cleaning operations. Osborn Mfg. Co., Cleveland, Ohio.
OSTUCO — Seamless and electric welded steel tube. The Ohio Seamless Tube Co., Shelby, Ohio.
OVAL CAP — Flint equipped spark lighter. Matchless Utilities Co., Brooklyn, N. Y.
OVERLY — Pneumatic tools for grinding, brushing, sanding, buffing, etc. Charles F. Overly Co., Cleveland, Ohio.
OVERSPEC — Safety and welding goggles. Harry Buegeleisen Inc., Brooklyn, N. Y.
OWEN — Induction type arc welder. Owen Electric Co., Fayetteville, N. C.
OXALUMA — Grinding wheels and abrasive products. Cortland Grinding Wheels Corp., Chester, Mass.
OXWELD — Acetylene gas generators; welding and cutting torches; oxygen and acetylene regulators; combined rubber and fabric hose; welding flux; oxy-acetylene welding and cutting, deseaming, and heating machines; welding rods; two- and four-wheel hand trucks, and other products. The Linde Air Products Company, New York, N. Y.
OXYARC — Arc-oxygen process for cutting stainless alloy and non-ferrous metals Arcos Corp., Philadelphia, Pa.
OXYCUTTER—Arc-oxygen cutting electrodes. Arcos Corp., Philadelphia, Pa.
OXYGRAPH — Oxy-acetylene cutting machine. The Air Reduction Sales Co., New York, N. Y.

P

PF — Mild steel A-C—D-C electrode. Harnishfeger Corp., Milwaukee, Wis.
P&H — Welding equipment including motor driven D-C welders, welding positioners, a production welding control system, electric hoists and cranes, and accessories. Harnishfeger Corp., Milwaukee, Wis.
P-H — Welding cables. Progressive Welder Company, Detroit, Mich.
PKCO — Welding electrodes. Pelton-Kurtz Supply Co., Detroit, Mich.
PQ SILICATE OF SODA — Potassium silicate. Philadelphia Quartz Co., Philadelphia, Pa.
PAASCHE—Air-painting equipment. Paasche Airbrush Co., Chicago, Ill.
PACIFIC — Welding electrodes. Pacific Welding Alloys Mfg. Co., Los Angeles, Cal.
PAGE — Gas welding wire and rods and bare and flux coated electrodes. Page Steel and Wire Div., American Chain and Cable Co., Inc., Monessen, Pa.
PAGE-ALLEGHENY — Stainless steel electrodes and gas welding rods. Page Steel and Wire Division, American Chain and Cable Co., Monessen, Pa.
PAGE-ARMCO — Welding electrodes and gas welding wires. Page Steel and Wire Division, American Chain and Cable Co., Inc., Monessen, Pa.
PAINTMARX — Metal marking crayons. The American Crayon Co., Sandusky, Ohio.
PAL-WELD — Tinning and soldering fluxes and compounds, solders, soldering equipment, etc. Pal-Weld Mfg. Co., Seattle, Wash.
PALMER-SHILE — Cylinder truck. Palmer-Shile Co., Detroit, Mich.
PALMETTO — Asbestos safety clothing. Greene, Tweed & Co., North Wales, Pa.
PALMGREN — Cable connections, weld gauges and underwater cutting torches. Chicago Tool and Engineering Co., Chicago, Ill.
PARAFLEX — Flexible rubber wheels. A. P. de Sanno & Son, Inc., Phoenixville, Pa.
PARKER FERULOK — Flareless tube fitting. The Parker Appliance Co., Cleveland, Ohio.
PARIFLUX — Fluorspar. Foote Mineral Co., Philadelphia, Pa.
PARKER TRIPLE — Flared tube fitting. The Parker Appliance Co., Cleveland, Ohio.
PARKER-KALON — Drive-screw, also welding studs Parker-Kalon Corp., New York, N. Y.
PEARLITIC — Iron welding rods. Morey Flux & Chemical Co., Wilmington, Del.
PEER — Electric spot welders, A-C arc welders and accessories. Pier Equipment and Manufacturing Co., Benton Harbor, Mich.
PEERLESS — Hoists. The Harrington Co., Philadelphia, Pa.
PEERLESS — Oxygen and acetylene equipment including regulators and torches. The Welders Supply and Mfg. Co., Cincinnati, Ohio.
PENN — Bronze welding rods. Titan Metal Mfg. Co., Bellefonte, Pa.
PENN BRONZE — Deoxidized bronze welding rods. Titan Metal Mfg. Co., Bellefonte, Pa.
PERFECT — Leather welding gloves. E. J. Streichert, Chicago, Ill.
PERFECTED ZZ — Grinding wheel dressers. The Desmond-Stephan Mfg. Co., Urbana, Ohio.
PERFECTION — Welding ground clamp. Tweco Products Co., Wichita, Kan.
PERFECTION — Coated welding electrodes. Anthony Carlin Co., Cleveland, Ohio.
PERFECTION — Bar clamp. Cincinnati Tool Co., Norwood, Cincinnati, Ohio.
PERMACLAD — Stainless clad sheet steel. Jessop Steel Co., Washington, Pa.
PESCO — Copper welding rods and fluxes. Perry Equipment Corp., Philadelphia, Pa.
PETERSON — Preheating torches, surface grinders and welding fluxes. Peterson Welding Laboratories, Kansas City, Mo.
PHILGAS — Liquefied petroleum gas. Phillips Petroleum Co., Detroit, Mich.
PHILLSOLV — Vapor degreasing solvent. Phillips Manufacturing Co., Chicago, Ill.
PHOMAIRE FOAM PROPORTIONING TANK — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.
PHOMENE — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.
PHOMENE FOAM RECHARGE — Fire extinguisher recharges. Pyrene Manufacturing Co., Newark, N. J.
PHOMAIDE FOAM FORMING SOLUTION — Fire extinguisher recharges. Pyrene Manufacturing Co., Newark, N. J.
PHOMAIRE FOAM MAKER — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.
PHOMAIRE PLAYPIPE — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.
PHOS-COPPER—Copper alloy. Westinghouse Electric Corp., East Pittsburgh, Pa.
PHOSCO — Low temperature brazing. United Wire & Supply Corp., Providence, R. I.
PHOSPHORUS BRONZE 310 and 903 — Welding rods. American Brass Co., Waterbury, Conn.
PHOS-TRODE — Shielded arc phosphor bronze electrode. Carbon and metallic arc welding electrodes. Ampco Metals, Inc., Milwaukee, Wis.
PHOTOLOGUE — Welding catalogs, photo-offset catalogs. Photologue Publishing Co., Chicago, Ill.
PHOTOSWITCH — Welding timer. Photoswitch Inc., Cambridge, Mass.
PHOTOVOLT — Electric timer. Photovolt Corp., New York, N. Y.
PICKER — X-ray equipment and X-ray generators. Picker X-Ray Corp., New York, N. Y.
PIER — Welding timers. Pier Equipment Mfg. Co., Benton Harbor, Mich.

PIERCE—Governor for controlling the speeds of gasoline driven electric welders. Pierce Governor Co., Anderson, Ind.

PILOT-ARC — High frequency unit. Tri-Arc Corp., Chicago, Ill.

PIPETITE — Pipe joint compound. Lake Chemical Co., Chicago, Ill.

PITTSBURGH — Transformers. Allis Chalmers Mfg. Co., Milwaukee, Wis.

PITTSBURGH — Valves for oxygen, hydrogen, carbon dioxide, and other high pressure cylinders. Kerotest Manufacturing Co., Pittsburgh, Pa.

PITTSBURGH — Welding rods and wire. Pittsburgh Steel Co., Pittsburgh, Pa.

PLANEWELD — Welding electrode. The Lincoln Electric Co., Cleveland, Ohio.

PLANOGRAPH — Oxy-acetylene cutting machine. Air Reduction Sales Co., New York, N. Y.

PLASTALLOY — Alloy mold steel for plastic molds. Henry Disston & Sons, Inc., Tacony, Philadelphia, Pa.

PLASTIC-ARC — Electric arc welding machines. Wilson Welder and Metals Co., Inc., New York, N. Y.

PLASTI-GLASS — Shatter-resisting, chipproof lens for oxygen and acetylene pressure gauges. Plasti-Glass Products Co., Chicago, Ill.

PLASTI-GOGGLE — Welder's and industrial worker's goggle. Eastern Equipment Co., Willow Grove, Pa.

PLASTIKUT — Alloy mold steel for plastic molds. Henry Disston & Sons, Inc., Tacony, Philadelphia, Pa.

PLASTIRON — Hubbing iron for plastic molds. Henry Disston & Sons, Inc., Tacony, Philadelphia, Pa.

PLUMB — Files, blacksmith, scathing hammers and machinist's hammers. Fayette R. Plumb, Inc., Philadelphia, Pa.

PLUMB LEADER — Machinist's hammers. Fayette R. Plumb, Inc., Philadelphia, Pa.

PLURAMELT — Stainless clad steel. Allegheny Ludlum Steel Corp., Brackenridge, Pa.

PLYKROME — Stainless-clad steel. Plykrome Corp., New York, N. Y.

POLYGRAPH — Oxy-acetylene cutting machine. Air Reduction Sales Company, New York, N. Y.

PONY — Steel bar clamp and malleable iron "C" clamps made in various styles and designs. Adjustable Clamp Co., Chicago, Ill.

POR-OS-WAY — Plastic grinding wheels. A. P. DeSanno & Son, Inc., Phoenixville, Pa.

PORT-A-WELD — Portable welding units. Gellid Engineering, Oak Park, Ill.

PORTELVATOR — Portable elevating tables. The Hamilton Tool Co., Hamilton, Ohio.

PORTER'S — Bolt cutters. H. K. Porter, Inc., Somerville, Mass.

PORTER-CABLE — Belt grinders. The Porter-Cable Machine Co., Syracuse, N. Y.

PORTOVENT — Ventilating hose. American Ventilating Hose Co., New York, N. Y.

PORTO-SHEAR — Portable electric shears. The Black & Decker Mfg. Co., Towson, Md.

POSITIVE ARC — A-C transformer type welder. Welding Apparatus Co., Chicago, Ill.

POWAIR — For mounting under hood truck. Schramm, Inc., West Chester, Pa.

POWER NICKEL GENUINE—Babbitt metals. Magnolia Metal Co., Elizabeth, N. J.

POWERON — Nozzles. American-La France Foamite Corp., Elmira, N. Y.

POWER WELD — Alloys, powder welding, silver brazing, blow pipes brazing, brazing alloys and brazing outfits, gas machines, brazing gas, metal spraying equipment, nozzles, torch, powder welding torches, soldering outfits, tips, soldering tips, welding, gas, torches, brazing, torches, welding, gas, welders, inert gas, welders, projection, welding apparatus. The Powder Weld Process Co., Brooklyn, N. Y.

POWRARM — Welding positioners. Wilton Tool Manufacturing Co., Chicago, Ill.

PRECISION — Resistance welding machines. Precision Welder and Machine Company, Cincinnati, Ohio.

PRECISION — A-C arc welders, and, 2-carbon arc torch attachments. Precision Engineering Div., Chicago, Ill.

PREMIER — Welding and cutting outfits. Burdett Oxygen Co., Cleveland, Ohio.

PREMIER — Welding rods and electrodes. American Steel and Wire Co., Cleveland, Ohio.

PRESSURE BREAKER — Attachment for single-stage regulator to convert it into a 2-stage type. K-G Welding & Cutting Co., Inc., New York, N. Y.

PRESTO — Automatic helmet window. Sellstrom Manufacturing Co., Chicago, Ill.

PREST-O-LITE — Dissolved acetylene in cylinders, also for torches, soldering irons, regulators and other supplies used in applying the air-acetylene flame. The Linde Air Products Co., New York, N. Y.

PREST-O-WELD — Welding and cutting blow-pipes, oxygen and acetylene regulators, and other products. The Linde Air Products Co, New York, N Y

PRESIVE — Welding positioner. Bryant Products Distributing Co., Jackson, Mich.

PRESSTITE — Softweld sealers. Presstite Engineering Co., St. Louis, Mo.

PRODUCTER — Positioner. Bentley Weldery, Inc., Syracuse, N. Y.

PROGRESSIVE — Resistance welding equipment including spot, seam, butt and flash welders, both A-C and storage battery powered, as well as portable air and hydraulic operated welding guns. Progressive Welder Co., Detroit, Mich.

PROPELLAIR — Exhaust fans. Robbins & Myers, Inc., Springfield, Ohio.

PRO-TECTO—Welder's chrome leather safety clothing. Eastern Equipment Co., Willow Grove, Pa.

PROTECTOR — Germicidal lamp units. C-B Tool Co., Lancaster, Pa.

PURDUE — Electrode holder. Purdue Mfg. Co., Chicago, Ill.

PURE — Carbon brushes, plates and electrodes. Pure Carbon Co., Inc., St. Mary, Pa.

PURETUNG — Welding of metals. Callite Tungsten Corp, Union City, N. J.

PURITAN — Oxygen, hydrogen, acetylene, gases, electric welders, acetylene generators, welding and cutting equipment, welding rods, electrodes, fluxes, pre-heating outfits, pressure gauges. Puritan Compressed Gas Corp., Kansas City, Mo

PURITY — Flux. Purity Cylinder Gases, Inc., Grand Rapids, Mich.

PUR-METL — Flux for bronze welding cast iron. Pratt-Brayman Mfg. Co., Oscoda, Mich.

PUROX — Oxy-acetylene welding and cutting equipment. The Linde Air Products Co., New York, N. Y.

PYRO — Gas lighter. Safety Gas Lighter Co., Lynn, Mass.

PYROFAX — Hydrocarbon fuel gas. The Linde Air Products Co., New York, N. Y.

PROPELLAIR — Ventilating equipment. Robbins & Myers, Inc., Springfield, Ohio.

PROTECT-O-METAL — Arc welding compound. G. W. Smith & Sons, Dayton, Ohio.

PROTECT-O-METAL NO. 2 — Spatter preventive. G. W. Smith & Sons, Dayton, Ohio.

PROTECT-O-METAL NO. 7 — Flash preventive. G. W. Smith & Sons, Dayton, Ohio.

PROTECT-O-METAL NO. 9 — Rust preventive. G. W. Smith & Sons, Inc., Dayton, Ohio.

PROTECTED ARC — Electrodes. Hollup Corporation, Division of National Cylinder Gas Co., Chicago, Ill.

PROTECTIVE COAT — Liquid preparation which prevents weld spatter adhesion. Hollup Corp., Division of National Cylinder Gas Co., Chicago, Ill.

PROTEX — Non rust oils and coatings. Wayne Chemical Products Co., Detroit, Mich.

PUDDLER — Soldering tip. Cesco Products, Inc., Chicago, Ill.

PUL-LIFE — Ratchet lever hoist. The Yale & Towne Mfg. Co., Philadelphia, Pa.

PULMOSAN — Respirators, shield-respirators, welding helmets, goggles, welders' gloves, eyeshields, acid-handling equipment, and protective clothing. Pulmosan Safety Equipment Corp., Brooklyn, N. Y.

PURITAN PM-20 — Oxygen masks. Puritan Compressed Gas Corp., Kansas City, Mo.

PYRAMID — Babbitt metals. Magnolia Metal Co., Elizabeth, N. J.

PYRENE — Tire chains, self-closing repair links, emergency chains and chain tighteners. Pyrene Manufacturing Co, Newark, N. J.

PYRENE ANTI-FREEZE — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

PYRENE FOAM — Fire Extinguisher. Pyrene Manufacturing Co., Newark, N. J.

PYRENE FOAM-AUTOMATIC — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

PYRENE FOAM COMPOUND — Fire extinguisher recharges. Pyrene Manufacturing Co., Newark, N. J.

PYRENE FOAM MAKER — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

PYRENE FOAM-MARINE TYPE — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

PYRENE FOAM PLAYPIPE—Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

PYRENE FOAM PROPORTIONING TANK — Fire extinguisher Pyrene Manufacturing Co., Newark, N. J.

PYRENE FOAM RECHARGE — Fire extinguisher recharges. Pyrene Manufacturing Co., Newark, N. J.

PYRENE FREEZE-PROOF CHARGE — Fire extinguisher recharger. Pyrene Manufacturing Co., Newark, N. J.

PYRENE GARDESEAL—Fire extinguisher. Pyrene Manufacturing Co, Newark, N J.

PYRENE PUMP TANK — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

PYRENE SODA-ACID — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

PYRENE SODA-ACID RECHARGE — Fire extinguisher recharger. Pyrene Manufacturing Co., Newark, N. J.

PYRENE VAPORIZING LIQUID — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

PYRENE WATER-TYPE — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

Q

QIKLINK — Cable connectors. Burndy Engineering Co., New York, N. Y.

QIKLUG — Clamp type cable lug. Burndy Engineering Co., New York, N. Y.

QUAKER — Sand blast hose. Quaker Rubber Corp., Philadelphia, Pa.

QUAKEROID — Fibre sheet. Quaker Rubber Corp., Philadelphia, Pa.

QUICK AID FIREGUARD — Fire extinguishers. The General Detroit Corp., Detroit, Mich.

QUICK-AS-WINK — Air and hydraulic control valves and couplings. C. B. Hunt & Sons, Inc., Salem, Ohio.

QUICK-LIFT — Electric hoist. Coffin Hoist Co., Danville, Ill.

QUIK-TRIK — Electrode holder. Jackson Products, Detroit, Mich.

QUIKTAP — Connectors for cables. Burndy Engineering Co., New York, N. Y.

R

R&IE — Clamps. Railway and Industrial Engineering Co., Greensburg, Pa.

R-M — Asbestos products. Raybestos-Manhattan, Inc., Passaic, N. J.

R & M — Exhaust fans. Robbins & Myers, Inc., Springfield, Ohio

R MONEL — High-carbon Monel. The International Nickel Co., Inc., New York, N. Y.

RABIN — Welders' gloves. Rabin Glove Co., Jersey City, N. J.

RACINE — Metal cutting machines. Racine Tool & Machine Co., Racine, Wis.

RACO — Shielded arc electrodes, oxy-acetylene welding wires. Reid-Avery Co., Inc., Dundalk, Baltimore, Md.

RACOLLOY — Stainless steel electrodes and welding wire. Reid Avery Co., Dundalk, Baltimore, Md

RAD-ARC — A-C, arc, conversion unit. Cesco Products, Inc., Chicago, Ill.

RADIAC — Grinding wheels and abrasive cutoff machines. A. P. DeSanno & Son, Inc., Phoenixville, Pa

RADIAGRAPH — Portable, motor driven, oxy-acetylene cutting machine. Air Reduction Sales Co., New York, N. Y.

RAILWEAR — Heavily coated electrodes. Hollup Corporation, Division of National Cylinder Gas Co., Chicago, Ill.

RANALLOY — Alloy hard-facing electrodes. The Bergstrom Alloys Corp., Reno, Nev.

RANDALL — Tip cleaner and spark lighters. Welding & Cutting Materials Co., Kansas City, Mo.

RANDALL — Soap stone holder, tip cleaner and electrode holder. Randall Manufacturing Co., North Kansas City, Mo.

RANDOLPH — Fire extinguisher. Randolph Laboratories, Inc., Chicago, Ill.

RANDOLPH NO. 2 — Fire extinguisher. Randolph Laboratories, Inc., Chicago, Ill.

RANDOLPH NO. 4 — Fire extinguisher. Randolph Laboratories, Inc., Chicago, Ill.

RANDOLPH NO. 10 — Fire extinguisher. Randolph Laboratories, Inc., Chicago, Ill.

RANDOLPH NO. 15 — Fire extinguisher. Randolph Laboratories, Inc., Chicago, Ill.

RANDOLPH NO. 25 — Fire extinguisher. Randolph Laboratories, Inc., Chicago, Ill.

RANGER — A-C arc welder. Larkin Lectro Products Co., New York, N. Y.

RANITE A — Hard-facing electrode. Rankin Mfg. Co., Los Angeles, Cal.

RANITE B — Hard-facing electrode. Rankin Mfg. Co., Los Angeles, Cal.

RANITE C — Hard-facing electrode. Rankin Mfg. Co., Los Angeles, Cal.

RANSOME — Welding positioners, turning rolls. Ransome Machinery Company, subsidiary Worthington Pump and Machinery Corp., Dunellen, N. J.

RAPID — Cable and terminal connectors. Chicago Tool and Engineering Co., Chicago, Ill.

RAPID-TITAN — C clamps, jigs and fixtures. Rapid-Titan Manufacturing Co., Grand Rapids, Mich.
RAY-BAN — Glare protection lens. Bausch & Lomb Optical Co., Rochester, N. Y.
RAYTHEON — Electronic tubes for use in welding controls, miniature spot welders. Raytheon Mfg. Corp., Waltham, Mass.
READY-FLOW — Silver brazing alloy. American Platinum Works, Newark, N. J.
REATWIN — Grinding wheel dressers. The Desmond-Stephan Mfg. Co., Urbana, Ohio.
RED DEVIL — Flux coated electrodes. The Champion Rivet Co., Cleveland, Ohio.
RED DEVIL 75 — Flux coated electrodes. The Champion Rivet Co., Cleveland, Ohio.
REDDY — Grinder. The United States Electrical Tool Co., Cincinnati, Ohio.
RED END — Spring joint rules. The Lufkin Rule Co., Saginaw, Mich.
RED END — Hack saw blades. Simonds Saw & Steel Co., Fitchburg, Mass.
RED FLASH — Fluxes. Arc Welding Supply Co., Bronx, N. Y.
REDHEAD — Ground clamps for arc welding. Tweco Products Co., Wichita, Kan.
RED HEAD — Welding and lifting clamps, tanks, Chicago Boiler Co., Chicago, Ill.
RED HEAD — Acetylene generators, low pressure. Harris Calorific Co., Cleveland, Ohio.
RED-ROD — Steel welding electrodes. Marquette Manufacturing Co., Inc., Minneapolis, Minn
RED STREAK — Grinding wheels. Simonds Saw & Steel Co., Philadelphia, Pa.
RED TANG — Files. Simonds Saw & Steel Co., Fitchburg, Mass.
RED STRIPE — Emery cloth. Clover Manufacturing Co., Norwalk, Conn.
REED — Positioning rolls. Reed Engineering Co., Webb City, Mo.
REED — Vises. Reed Manufacturing Co., Erie, Pa.
REFLECTOSCOPE — Supersonic inspection equipment. Sperry Products, Inc., Hoboken, N. J.
REFLECTOGAGE — Thickness tester. Sperry Products, Inc., Hoboken, N. J.
REFORMEND — Covered steel electrode. Arcos Corp., Philadelphia, Pa.
REGO — Welding and cutting apparatus, including torches, regulators, welding fluxes, welding rods, electrodes, accessories, and supplies. National Cylinder Gas Co., Chicago, Ill.
REGO — Oxygen, acetylene, hydrogen manifolds and regulators, air regulators, medical oxygen therapy regulators and cylinder valves. The Bastian-Blessing Co., Chicago, Ill.
REHEAT — Asbestos sheet. Quaker Rubber Corp., Philadelphia, Pa.
REINER — Portable acetylene generator. Reiner and Campbell, Elizabeth, N. J.
RELIABLE — Screw plate sets. Mayhew Steel Products, Inc., Shelburne Falls, Mass.
RELTOOL — Saws. Reltool Corp., Milwaukee, Wis.
REP — Fluxes, soldering. Puritan Compressed Gas Co., Kansas City, Mo.
REPUBLIC — Steel and electric welded pipes, casing, tubing, etc. Republic Steel Corp., Cleveland, Ohio.
REPUBLIC DOUBLE STRENGTH — Copper nickel molybdenum high tensile steel. Republic Steel Corp., Cleveland, Ohio.
RESBOND — Resin-bonded coated abrasive. Clover Manufacturing Co., Norwalk, Conn.
RESISTO-LOY — Hard surfacing metal. Resisto-Loy Co., Grand Rapids, Mich.
REVERE BRAZING METAL — Brazing metal. Revere Copper and Brass, Inc., New York, N. Y.
REVERE ELECTROLYTIC COPPER — Copper wire. Revere Copper and Brass, Inc, New York, N. Y.
REVERE 456 — Bronze welding rod. Revere Copper and Brass, Inc., New York, N. Y.
REVERE MANGANESE BRONZE — Bronze welding rods. Revere Copper and Brass, Inc., New York, N. Y.
REVERE PHOSPHOR BRONZE — Tin-bronze welding rods. Revere Copper and Brass, Inc., New York, N. Y.
REVERE PHOSPHOR DEOXIDIZED COPPER — Phosphor deoxidized copper welding rods. Revere Copper and Brass, Inc. New York, N. Y.
REVERE SILICON DEOXIDIZED COPPER — Silicon deoxidized copper. Revere Copper and Brass, Inc., New York, N. Y.
REVERS-O-CHARGE — Welding control equipment. Weltronic Co., Detroit, Mich.
REX — Resistance welding machines and an attachment for converting spot welder into a butt welder. Rex Welder and Engineering Co., Kansas City, Mo.
REXALOY — Alloy overlay electrode. Sight Feed Generator Co., Richmond, Ind.
REXARC — A-C arc welder and carbon arc torch. Sight Feed Generator Co., Richmond, Ind.
REXWELD—Hard surfacing welding rods and electrodes. Crucible Steel Co. of America, New York, N. Y.
REYNOLDS — Aluminum and aluminum alloys. Reynolds Metal Co., Louisville, Ky.
REZISTAL — Stainless steels and electrodes. Crucible Steel Co. of America, New York, N. Y.
RIDO RAY — Welders' goggles. Harry Buegeleisen, Inc., Brooklyn, N. Y.
RIEHLE — Machines for testing of materials. Riehle Testing Machine Div., American Machine & Metals, Inc., E. Moline, Ill.
RINGLOCK — Wire section brushes. The Osborn Mfg. Co., Cleveland, Ohio.
RIPLEY RIVET GUN — Rivet gun. Ripley Co., Inc., Middletown, Conn.
RIPLEY WELDING TIMER — Timer for spot welding. Ripley Co., Inc., Middletown, Conn.
RIVERSIDE — Phosphor bronze alloys uncoated welding rods. Riverside Metal Co., Riverside, Burlington Co., N. J.
RIVWELD — Stud welder fastener. Nelson Stud Welding, Div. of Morton Gregory Corp., Lorain, Ohio.
ROCKWELL — Hardness testers. Wilson Mechanical Instrument Co., New York, N. Y.
ROD SAVER — Electrode holders. Martin Wells, Los Angeles, Cal.
ROD SAVER-CUB — Electrode holder. Martin Wells, Inc., Los Angeles, Cal.
ROD SAVER-MASTER — Electrode holder. Martin Wells, Inc., Los Angeles, Cal.
ROD SAVER-STUBBY — Electrode holder. Martin Wells, Inc., Los Angeles, Cal.
ROEBLING — Welding wire also welding cables. John A. Roebling's Sons Co., Trenton, N. J.
ROEWELD — Welding cable. John A. Roebling's Sons Co., Trenton, N. J.
ROL-MAN — Manganese steel welding rods. Manganese Steel Forge Company, Philadelphia, Pa.
ROMAN BRONZE — Bronze rod. Revere Copper and Brass, Inc., New York, N. Y.
ROME 60-38 — Arc welding cable. Rome Cable Corp., Rome, N. Y.
ROUND FILE IMPROVED — Gas lighters. Safety Gas Lighter Co., Lynn, Mass.
ROUND FILE POPULAR — Gas lighters. Safety Gas Lighter Co., Lynn, Mass.
ROYAL — Surface hardening powder. Antiborax Compound Co., Fort Wayne, Ind.
ROYAL — Drills. Canedy Otto Mfg. Co., Chicago Heights, Ill.
ROYAL CLIPPER — Metal cutter and 1 shrinker; metal stretcher and crimper; cable splicing and joggling blocks; rivet cutter. C. B. Tool Co., Lancaster, Pa.
ROYAL CREST — Press type spot welder. The Central Sales Corp., Chicago, Ill.
RUBY'S — Stainless steel soldering flux. The Ruby Chemical Co., Columbus, Ohio.
RUBY FLUX — Soldering flux and acid-core and rosin-core solder. The Ruby Chemical Co., Columbus, Ohio.
RUEMELIN — Welding fume collector. Ruemelin Mfg. Co., Milwaukee, Wis.
RUFLUX — Arc stabilizer. Tilan Alloy Manufacturing Co., Niagara Falls, N. Y.
RUPTAIR — Circuit breakers. Allis Chalmers Mfg. Co., Milwaukee, Wis.
RUPTOR — Circuit breakers. Allis Chalmers Mfg. Co., Milwaukee, Wis.
RUSSELL — Welders' gloves. Frank Russell Glove Co., Berlin, Wis.
RUST-I-CIDE — Non-rusting soldering flux for soldering iron or steel. Rusticide Products Co., Cleveland, Ohio.
RUST-BLOC No. 20 — Rust preventive. Truco Products, Inc., Los Angeles, Cal.
RUST-OLEUM — Rust preventive coating. Rust Oleum Corp., Evanston, Ill.
RUST-STRIP — Rust remover. The Wilbur & Williams Co., Boston, Mass.
RUST-TOX—Preparation for preventing rust. Skybrite Co., Cleveland, Ohio.
RUST VETO — Rust exhibitors. E. F. Houghton & Co., Philadelphia, Pa.
RY-ALLOY — Steel bars. Joseph T. Ryerson & Son, Inc., Chicago, Ill.
RYARM — Steel bars. Joseph T. Ryerson & Son, Inc., Chicago, Ill.
RYAX — Steel bars. Joseph T. Ryerson & Son, Inc., Chicago, Ill.
RYCASE — Steel bars. Joseph T. Ryerson & Son, Inc., Chicago. Ill.
RYCO — Steel bars. Joseph T. Ryerson & Son, Inc., Chicago, Ill.
RYERSON — Welding rods, electrodes and for various steel products such as bar, sheet, plate, etc. Joseph T. Ryerson & Son, Inc., Chicago, Ill.
RYERSON V.D. STEEL — Steel bars. Joseph T. Ryerson & Son, Inc., Chicago, Ill.
RYERTEX — Phenolic laminated bearings. Joseph T. Ryerson & Son, Inc., Chicago, Ill.
RYEX — Expanded metal. Joseph T. Ryerson & Son, Inc., Chicago, Ill.
RYTENSE — Steel bars. Joseph T. Ryerson & Son, Inc., Chicago, Ill.

S

SF — Acetylene air soldering and brazing equipment, welding and brazing fluxes, accessories, etc. Sight Feed Generator Co., Richmond, Ind.
S-F — Acetylene generators. Sight Feed Generator Co., Richmond, Ind.
SGI — Acetylene; argon; helium; nitrogen; oxygen; acetylene and oxygen cylinder manifolds. Steele Gases, Inc., Chicago, Ill.
SM — A-C—D-C electrode. Harnischfeger Corp., Milwaukee, Wis.
S MONEL—Silicon-bearing monel. The International Nickel Co., Inc., New York, N. Y.
S-M-S—Resistance welding die materials and tips for spotwelders, seamwelder wheels, projection and flash welder dies and special alloy forgings and castings. S-M-S Corp., Detroit, Mich.
SR-4 — Strain gauge. Baldwin Southwark Div., The Baldwin Locomotive Works, Philadelphia, Pa.
S.R.P.—Rust preventative. L. Soneborn Sons, Inc., New York, N. Y.
SS HIGH STRENGTH — Alloy welding rod. Steel Sales Corp., Chicago, Ill.
SAF-T — Leather safety garments. Aljay Mfg. Co., Inc., Philadelphia, Pa.
SAFE-AIRE — Dust collectors suitable for use in various dust collecting. Ralph Maitland, Cleveland, Ohio.
SAFE-T-CHEK — Safety device to prevent a flashback of gases from reaching or entering the regulators. Modern Engineering Co., Inc., St. Louis, Mo.
SAFE-T-VIS — Protective goggles. The Univis Lens Co., Dayton, Ohio.
SAFE-WELD — Arc and oxy-acetylene welding supplies. Welding Engineering Co., Milwaukee, Wis.
SAFE-WELD — Welding plates. Flood Safety Products Co., Chicago, Ill.
SAFE-WELD — Welding helmets. E. D. Bullard Co., San Francisco, Cal.
SAFETY CIRCLE — Motors. Allis Chalmers Mfg. Co., Milwaukee, Wis.
SAFETY PULL — Ratchet lever hoist. Coffin Hoist Co., Danville, Ill.
SAFETY SERVICE — Welding helmets. Safety Equipment Service Co., Cleveland, Ohio.
SAFRONT — Resistance weld and sequence timers. Square D Co., Milwaukee, Wis.
SALSBURY — Pneumatic tool for chipping, scaling, riveting, etc. Salsbury Corp., Los Angeles, Cal.
SAMSON — Grinding wheel dressers. G. J. Wallen Manufacturing Co., San Francisco, Cal.
SALSBURY — Pneumatic air hammer. Salsbury Corp., Los Angeles, Cal.
SAMSON — Rotary wire wheel brushes. The Manufacturers Brush Co., Cleveland, Ohio.
SANI-SPRAY — Goggle spray station. Allen Optical Co., Buffalo, N. Y.
SAOCO — Oxygen acetylene. Houston Oxygen Co., Houston, Texas.
SATINARC — Modified type of sul-coated electrode. Universal Power Co., Cleveland, Ohio.
SAUNDERS — Valves for airlines. Grinnell Co., Inc., Providence, R. I.
SAW GUN — Power driven hack saw and file. Mid-States Equipment Corp., Chicago, Ill.
SAXE—Seat and erection clip. J. H. Williams & Co., Buffalo, N. Y.
SCAIFLUX 21 and 22 — Silver brazing fluxes. Scaife Co., Oakmont, Pa.
SCALEMASTER — Hammers; chipping and scaling. The Fibre-Metal Products Co., Chester, Pa.
SCALEMASTER — Weld cleaning tool. Industrial Products Co., Philadelphia, Pa.
SCHOITZ — Automatic cutting machine. Schoitz Engineering Works, Waterloo, Iowa.
SCHRADER — Gas engine driven portable arc welders. Electromagnets for aligning and positioning plates in various welding applications. F. W. Schrader Co., Culver City, Cal.
SCIAKY — Resistance welding equipment which includes spot welders, seam and roll spot welders, flash-butt welders, projection welders, multiple head spot welders, and portable equipment. A-C and D-C resistance welders. Sciaky Bros., Chicago, Ill.
SCORFILL — Alloy used to fill scored automobile and other cylinders. Smith Welding Equipment Corp., Minneapolis, Minn.
SCRATCHMASTER — Wire brushes. The Fibre-Metal Products Co., Chester, Pa.
SCREW SHOOTER — Electric portable screw driver. Milwaukee Electric Tool Corp., Milwaukee, Wis.
SEACO — Hard-surfacing electrodes. Stulz-Sickles Co., Newark, N. J.
SEAL KRAX — Solder bars. Modern Engineering Co., Inc., St. Louis, Mo.
SEAL-TIGHT — A-C arc welders. Will-Weld Mfg. Co., Inc., Omaha, Neb.

SEAL-X-O — Filler for rough and porous welds. Metal Bond Mfg. Co., St. Louis, Mo.
SEALDFIT — Hose coupling. American Electric Fusion Corp., Chicago, Ill.
SEARCHLIGHT — Acetylene cylinders. Air Reduction Sales Co., New York, N. Y.
SEEM-WELDO — Seam weld timer. Time and Signal Corp., Detroit, Mich.
SECURITY FLEX — Arc welding cable. Anaconda Wire & Cable Co., New York, N. Y.
SEL BLUE — White for flash goggles. Sellstrom Manufacturing Co., Chicago, Ill.
SEL GREEN — Lens for flash goggles. Sellstrom Manufacturing Co., Chicago, Ill.
SEL HARD — Hardening lenses. Sellstrom Manufacturing Co., Chicago, Ill.
SEL-O-MATIC — Adjustment for helmets. Sellstrom Manufacturing Co., Chicago, Ill.
SELCO — Indicator. H. H. Sell Electric Co., Minneapolis, Minn.
SEL SAFE — Laminated lens. Sellstrom Mfg. Co., Chicago, Ill.
SEL XX — Optically ground and polished lens. Sellstrom Mfg. Co., Chicago, Ill.
SENECA GASWELD — Electric and gas welding wire. Seneca Wire & Mfg. Co., Fostoria, Ohio.
SERVIT — Connectors to accommodate two conductors. Burndy Engineering Co., New York, N. Y.
SERV-RITE — Protecting tubes. Claud S. Gordon Co., Chicago, Ill.
SEYMOUR — Bronze welding rods. The Seymour Mfg. Co., Seymour, Conn.
SHAWINIGAN CARBIDE — Calcium carbide. Shawinigan Products Corp., New York, N. Y.
SHELL INDUSTRIAL GAS — Liquified petroleum gas. Shell Oil Co., Inc., New York, N. Y.
SHERMAN — Grinding wheel dressers. The Desmond-Stephan Mfg. Co., Urbana, Ohio.
SHIELD-ARC — D-C welding machines and electrodes. The Lincoln Electric Co., Cleveland, Ohio.
SHIPCO — Steel welding wire and aluminum welding rods. Superior Oxy-Acetylene Machine Co., Hamilton, Ohio.
SHOBER — Coated arc welding electrodes. Shober Sales Co., Stockton, Cal.
SHOCKLESS — Center drills. Reltool Corp., Milwaukee, Wis.
SHOOT-A-LITE — Gas lighter. Shoot-A-Lite Corporation, New York, N. Y.
SHRADER — Gasoline engine driven arc welders and power plants. F. W. Shrader Co., Culver City, Cal.
SHURLITE — Torch and gas lighter. G. C. Fuller Mfg. Co., Cincinnati, Ohio.
SIGHT FEED — Acetylene generators and floodlights. A-C arc welders. Sight Feed Generator Co., Richmond, Ind.
SIL-AID — Silver brazing alloys. United Wire & Supply Corp., Providence, R. I.
SIL-BOND — Silver brazing alloys. United Wire & Supply Corp., Providence, R. I.
SILCALITE — Calcium metasilicate. Foote Mineral Co., Philadelphia, Pa.
SIL-CARB — Silicorn carbide papers and cloths. Clover Manufacturing Co., Norwalk, Conn.
SIL-FLUX — Silver brazing alloys. United Wire & Supply Corp., Providence, R. I.
SIL-FOS — Brazing alloy. Handy & Harman, New York, N. Y.
SILFRAM—Cast hard-facing rod. Stoody Co., Whittier, Cal.
SIL GREEN — Hardened lens. Sellstrom Mfg. Co., Chicago, Ill.
SIL-TITE — Silver brazing alloys. United Wire & Supply Corp., Providence, R. I.
SIL-TRODE — Carbon and metallic arc welding electrodes. Ampco Metal, Inc., Milwaukee, Wis.
SILK HAT — Tinning compounds and fluxes. Alwarth Chemical Corp., New York, N. Y.
SILVALOY — Welding, brazing and soldering flux. The Linde Air Products Co., New York, N. Y.
SILVER — Welding electrodes. American Agile Corp., Cleveland, Ohio.
SILVER MAGIC — Silver solder. Universal Welder Corp., Cleveland, Ohio.
SILVER STEEL — Saws; knives; files. E. C. Atkins & Co., Indianapolis, Ind.
SILVER STREAK—Aluminum oxide abrasive coated cloth in disc and roll form. Abrasive Products, Inc., S. Braintree, Mass.
SIMPLEX — Jacks, steamboat ratchets, etc. Abrasive belt sander. Templeton, Kenly & Co., Chicago, Ill.
SIMPLEX — Electrode holder. The Fibre-Metal Products Co., Chester, Pa.
SIMPLEX—Oxy-acetylene welding rod. Air Reduction Sales Co., New York, N. Y.
SINGER — Wearing apparel such as coats, overalls, bibs, sleeves, etc. Singer Leather Clothing Co., Philadelphia, Pa.
SITUFT — Brushes. The Osborn Mfg. Co., Cleveland, Ohio.
600 — Electrode for arc welding of cast iron. C. E. Phillips & Co., Detroit, Mich.
636-SERIES — Filters and dryers for gas and air. The Gas Flux Co., Mansfield, Ohio.
6N6 (M2) — Molybdenum high speed steel. Henry Disston & Sons, Inc., Tacony, Philadelphia, Pa.
SKILLTOOLS — Portable electric tools. Skilsaw, Inc., Chicago, Ill.
SKIP TOOTH — Pipe die. Nye Tool Co., Chicago, Ill.
SKULLGARD—Protective hat combined with a welding shield. Mine Safety Appliances Co., Pittsburgh, Pa.
SKULLGARD — Welding shield helmet, welding shield. Mine Safety Appliances Co., Pittsburgh, Pa.
SLAIDARC—Coated stainless electrodes. Universal Welder Corp., Cleveland, Ohio.
SLIP-ON—Cartridge renewal for a gas lighter. Safety Gas Lighter Co., Lynn, Mass.
SLO-DRIVE — Drill press speed reducer. Cardinal Machine Co., Glendale, Cal.
SMITH'S — A-C welding and cutting torches, regulators, A-C arc welders, welding rods and electrodes, accessories and supplies, preheating torches, acetylene generators, etc. Smith Welding Equipment Corp., Minneapolis, Minn.
SMITH DOLAN — Induction heaters. Electric Arc, Inc., Newark, N. J.
SMITHWAY — Welding electrodes, A-C transformer type arc welders, welding monitor. A. O. Smith Corp., Milwaukee, Wis.
SMOOTH-IZE — Compound for smoothing welds and castings. Hollup Corporation, Division of National Cylinder Gas Co., Chicago, Ill.
SMOOTH-RUN — Abrasive belts, bands and sleeves. Clover Manufacturing Co., Norwalk, Conn.
SNAP-LOCK — Pliar wrench. Seymore Smith & Son, Inc., Oakville, Conn.
SNAP-TITE — Couplings. Snap-Tite, Inc., Erie, Pa.
SNUGFIT — Wire pipe hooks. The Paine Co., Chicago, Ill.
SOCKET END WELDOLETS — Forged pipe welded fittings. Bonney Forge & Tool Works, Allentown, Pa.
SOCO — Oxygen acetylene. Houston Oxygen Co., Houston, Texas.
SOD-LOOM—Aluminum solder. Omaha Welding Co., Omaha, Neb.
SOFFELITE — Flux for aluminum. Pittsburgh Metals Purifying Co., Pittsburgh, Pa.
SOFTARC — Lime drawn electrode. Universal Power Corp., Cleveland, Ohio.
SOFTCAST A — Shielded arc electrode. Hobart Brothers Co., Troy, Ohio.
SOFTCAST C — Coated electrode. Hobart Brothers Co., Troy, Ohio.
SOFT IRONWELD — Coated iron electrode. Steel Sales Corp., Chicago, Ill.
SOFTWELD—Electrode for welding cast iron. Lincoln Electric Co., Cleveland, Ohio.
SOL-CON — Welding cable connector. Tweco Products Co., Wichita, Kans.
SOLAR — Stainless steel welding flux. Victor Equipment Co., San Francisco, Cal.
SOLAR GH-16 — Welding flux. Solar Aircraft Co., San Diego, Cal.
SOLDALOY — Copper alloys for soldering iron tips. P. R. Mallory & Co., Inc., Indianapolis, Ind.
SOLDERING FLUID — Soldering fluids. Johnson Manufacturing Co., Mount Vernon, Iowa.
SOLDER-IT — Metallic compound to seal leaks in boilers, radiators, cracked cylinder heads, water jackets or engine blocks. York Engineering Co., Chicago, Ill.
SOLDER FLUX — Flux for repairing scored cylinders and for other soldering work. Smith Welding Equipment Corp., Minneapolis, Minn.
SOMMER & ADAMS — Special machinery. The Federal Machine & Welder Co., Warren, Ohio.
SONIZON — Inspection equipment. Ultrasonic Magnaflux Corp., Chicago, Ill.
SOUTHWARK — Hydraulic and special machinery. Baldwin Southwark Division, The Baldwin Locomotive Works, Philadelphia, Pa.
SOUTHWARK-TATE-EMERY — Testing machines. Baldwin Southwark Division, The Baldwin Locomotive Works, Philadelphia, Pa.
SPATTER-BAN — Coated cover plates. Kimball Safety Products Co., Cleveland, Ohio.
SPATTER-EX — Compound to prevent spatter from bonding to metal parts. Wayne Chemical Prod. Co., Detroit, Mich.
SPATTER-NOX — Liquid material for brushing, or spraying, for elimination weld spatter sticking. Universal Welding Corp., Cleveland, Ohio.
SPATTER-OFF — Paste for elimination of weld spatter sticking. Universal Welding Corp., Cleveland, Ohio.
SPATTERPROOF — Lamp to withstand hot weld spatter and rough handling. Radiant Lamp Corp., Newark, N. J.
SPE-WELD — Welding and brazing alloys, cast iron electrodes mild steel electrodes, shielded arc electrodes for welding of stainless steel, welding cables. Special Welding Alloy Co., Inc., Long Island City, N. Y.
SPECTI-GOGGLE — Spectacle type goggles. Eastern Equipment Co., Inc., Willow Grove, Pa.
SPEC-PRO-TECTOR — Welder's and industrial goggles. Eastern Equipment Co., Willow Grove, Pa.
SPEC WELDER — Leather welding gloves. E. J. Streichert, Chicago, Ill.
SPECIAL — Carbon tool steel. Firth-Sterling Steel Co., McKeesport, Pa.
SPECIAL SHAPES — Furnished per specifications. Mexico Refractory Co., Mexico, Mo.
SPECIAL TITE-KOTE — Coated manganese nickel steel electrodes. Stulz-Sickles Co., Newark, N. J.
SPED CABLE — Welding cable connector. Yarco Distributors, Los Angeles, Cal.
SPEED KING — Cutting torch. Harris Calorific Co., Cleveland, Ohio.
SPEEDARC — Electric arc welding machines. Ideal Electric and Manufacturing Co., Mansfield, Ohio.
SPEED-O-MATIC — Automatic welding wire. Allied Weld-Craft, Inc., Indianapolis, Ind.
SPEEDOMATIC — Automatic arc welding wire. Steel Sales Corp., Chicago, Ill.
SPEEDOX DO8 — Carbon steel wire. Central Steel & Wire Co., Chicago, Ill.
SPEED VISE — Drill press vises and machinists' vise. Cardinal Machine Co., Glendale, Cal.
SPEEDWAY — Electric hoists. Wright Hoist Div. of American Chain & Cable Co., Inc., York, Pa.
SPEED-WET — Waterproof coated abrasive. Behr-Manning Corp., Troy, N. Y.
SPEEDWITCH — Flexible shaft grinder. Charles L. Jarvis Co., Middletown, Conn.
SPEEDWITCH — Coated electrode. Eastern Equipment Corp., Willow Grove, Pa.
SPEER — Carbon arc welding rods, welding plates, and welding paste; welding generator and motor brushes. Speer Carbon Co., St. Marys, Pa.
SPERRY — Resistance type flash butt welder. Sperry Products, Inc., Hoboken, N. J.
SPIRABAND — Coated abrasive. Behr-Manning Corp., Troy, N. Y.
SPIRABELT — Coated abrasive. Behr-Manning Corp., Troy, N. Y.
SPIRATUBE — Cloth covered flexible tubing. Warner Bros. Co., Bridgeport, Conn.
SPITFIRE — Rosin disc. Abrasive Products, Inc., S. Braintree, Mass.
SPLICIT — Automatic line splice for joining lines or cables. Burndy Engineering Co., New York, N. Y.
SPOTLESS — Coated cover lens. Universal Power Corp., Cleveland, Ohio.
SPRABABBITT — Babbitt metal wire. Metallizing Engineering Co., Long Island City, N. Y.
SPRABOND — Metallizing wire. Metallizing Engineering Co., Inc., Long Island City, N. Y.
SPRABRASS — Brass wire for metallizing. Metallizing Engineering Co., Long Island City, N. Y.
SPRABRONZE — Bronze wires for metallizing applications. Metallizing Engineering Co., Inc., Long Island City, N. Y.
SPRAIRON — Iron wire for metallizing applications. Metallizing Engineering Co., Inc., Long Island City, N. Y.
SPRASTEEL — Steel wires for metallizing applications. Metallizing Engineering Co., Inc., Long Island City, N. Y.
SPRAY MIX—Coating refractory. Mexico Refractory Co., Mexico, Mo.
SPRAYWELD — A term used to describe the execution of the sprayweld process. Wall Colmonoy Corp., Detroit, Mich.
SPRAYWELD PROCESS — A process combining welding and metallizing pertaining to Colmonoy alloys. Wall Colmonoy Corp., Detroit, Mich.
SPRAY WELDER—A powder metallizing unit. Wall Colmonoy Corp., Detroit, Mich.
SQUARE D — Resistance welder control. Square D Co., Industrial Controller Div., Milwaukee, Wis.
SQUEEZE-GRIP — Carbon dioxide portable fire extinguishers (discharge valve). C-O-Two Fire Equipment Co., Newark, N. J.
STABLE-ARC — Welding electrodes. Lincoln Electric Co., Cleveland, Ohio.

STACKPOLE — Arc welding and brazing carbons, welding tips, generator brushes, welding paste, etc. Stackpole Carbon Co., St. Marys, Pa.
STAIDARC — Modified coated electrode. Universal Welding Co., Cleveland, Ohio.
STAIN-CRAFT — Electrodes for welding chrome and nickel stainless steel, and chromium-iron. Allied Weld-Craft, Inc., Indianapolis, Ind.
STAIN-ROD—Stainless steel electrodes. Marquette Manufacturing Co., Inc., Minneapolis, Minn.
STAINARC — Stainless steel welding rods and electrodes. Universal Power Corp., Cleveland, Ohio.
STAINKOTE—Stainless steel electrodes. Central Steel and Wire Co., Chicago, Ill.
STAINLEND — Covered electrodes for welding chrome-nickel steels. Arcos Corp., Philadelphia, Pa.
No. 6 STAINLESS — Steel soldering flux. Farrelloy Co., Philadelphia, Pa.
ST. PIERRE — Combination hammer, chisel and brush for use in cleaning welds. St. Pierre Chain Corp., Worcester, Mass.
STAINMANG — Austenitic electrodes. Arcos Corp., Philadelphia, Pa.
STAINOX — Treated, bare rod. Central Steel and Wire Co., Chicago, Ill.
STAINWELD — Welding electrodes. Lincoln Electric Co., Cleveland, Ohio.
STANDARD — Screw geared hoist. Chisholm Moore Hoist Corp., Tonowanda, N. Y.
STANDARD — Water hardening tool steel. Henry Disston & Sons, Inc., Tacony, Philadelphia, Pa.
STANDARD — Power hack saws. Peerless Machine Co., Racine, Wis.
STANDARD — Welding positioner. Standard Machinery Co., Providence, R. I.
STANDARD — Welding rods and electrodes. Standard Steel and Wire Co., Bolivar, Pa.
STANLEY — Portable electric grinders, sanders, bench grinders, drills and motor driven shears. Stanley Electric Tool Div., The Stanley Works, New Britain, Conn.
STANWELD — Tubing. The Standard Tube Co., Detroit, Mich.
STAR — Hack saw blades and frames; metal cutting band saws. Clemson Bros., Inc., Middletown, N. Y.
STAR — Plow points. Star Manufacturing Co., Division of Illinois Iron & Bolt Co., Carpentersville, Ill.
STAR J — Metal-cutting tools. Haynes Stellite Co., New York, N. Y.
STAR-MO — "Moly" high-speed steel. Firth-Sterling Steel Co., McKeesport, Pa.
STARRETT — Hack saws and band saws. The L. S. S. Farrett Co., Athol, Mass.
STAR WELDER — Spot and butt welders. Ames Spot Welder Co., Inc., Brooklyn, N. Y.
STASAFE — Eye shield. Standard Safety Equipment Co., Chicago, Ill.
STASAFE HAIRGARD — Cap fitted with a transparent acetate visor. Standard Safety Equipment Co., Chicago, Ill.
STATTFLUX — Inspection equipment and metals. Magnaflux Corp., Chicago, Ill.
STE-D-ARC — Electrode holders. Modern Engineering Co., Inc., St. Louis, Mo.
STEEL CITY—Portable hardness tester. Steel City Testing Laboratory, Detroit, Mich.
STEEL GRIP — Welders' protective clothing comprising gauntlet gloves and mitten, both in leather and asbestos, sleeves, aprons, vests, jackets, pants, leggings, chaps, etc. Industrial Gloves Co., Danville, Ill.
STEELKOTE — Coated electrodes. Central Steel and Wire Co., Chicago, Ill.
STEELKOTE 6 — Low carbon, full fluxed electrode. Central Steel and Wire Co., Chicago, Ill.
STEELKOTE 110 — Flux coated high carbon electrode. Central Steel and Wire Co., Chicago, Ill.
STEELRITE — Crayon for marking steel. Whittaker, Clark & Daniels, Inc., New York, N. Y.
STEELWELD MACHINERY — Metal-forming presses, press brakes, shears and bull-dozers fabricated of welded steel plates, shapes and parts. Steelweld Machinery Division of The Cleveland Crane and Engineering Co., Wickliffe, Ohio.
STEINER — Drying ovens for coated electrodes. Steiner-Ives Co., Newark, N. J.
STELCO — Welding tips. Dockson Corp., Detroit, Mich.
STERLING — Flints for torch lighters. Flint Products Co., Brooklyn, N. Y.
STERLING — Rock salt and salt tablets dispensers. International Salt Co., Inc., Scranton, Pa.
STERLING STAINLESS—Straight-chromium stainless steels. Firth-Sterling Steel Co., McKeesport, Pa.
STERLING TOOL — Water-hardening carbon steel. Firth-Sterling Steel Co., McKeesport, Pa.
STERBON — Grinding wheel. Sterling Grinding Wheel Div., The Cleveland Quarries Co., Tiffin, Ohio.
STERLITH—Grinding wheel. Sterling Grinding Wheel Div., The Cleveland Quarries Co., Tiffin, Ohio.
STERMOUNT — Small wheels and points. Sterling Grinding Wheel Div., The Cleveland Quarries Co., Tiffin, Ohio.
STOODEX — Cast hard-facing rod. Stoody Co., Whittier, Cal.
STOODITE — Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY 1 — Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY 6 — Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY 101—Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY 102—Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY 105—Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY 120—Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY 121—Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY 122—Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY 130 — Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY 1027—Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY BORIUM INSERTS — Pure tungsten-carbide. Stoody Co., Whittier, Cal.
STOODY GRINDERS — Aerial, flexible shaft oil tool grinders. Stoody Co., Whittier, Cal.
STOODY HIGH CARBON — Welding rod. Stoody Co., Whittier, Cal.
STOODY MANGANESE — Welding rod. Stoody Co., Whittier, Cal.
STOODY WEAR-RESISTANT CASTINGS — Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY SELF-HARDENING — Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY SELF-HARDENING-21 — Hard-facing alloy. Stoody Co., Whittier, Cal.
STOODY WELDING JIG — Jig. Stoody Co., Whittier, Cal.
STOODY — Hard-facing metals, welding rods, grinders and other equipment. Stoody Co., Whittier, Cal.
STOODY A-C — Hard-facing rod. Stoody Co., Whittier, Cal.
STOODY SELF-HARDENING — Hard facing rod. Stoody Co., Whittier, Cal.
STOW — Flexible shaft machines; flexible shaft power drives and flexible shaft remote controls for valves, etc. Stow Manufacturing Co., Binghamton, N. Y.
STRAIGHT HOLDERS—Holders. S-M-S Corp., Detroit, Mich.
STRAND — Flexible shaft machines and attachments. N. A. Strand & Co., Chicago, Ill.
STRAUSS — Safety equipment. Strauss Co., Pittsburgh, Pa.
STREAMLINE — Bronze fittings and copper pipe. Mueller Brass Co., Port Huron, Mich.
STREAMLINE — Electrode holders. Wagner Manufacturing Co., Inc., Jackson, Mo.
STREAMLINE JUNIOR — 200 amp gas engine driven arc welder. Hobart Bros., Co., Troy, Ohio.
STREICHERT'S GLOVES — Leather welding gloves. E. J. Streichert, Chicago, Ill.
STRESSCOAT — Stress analysis equipment. Magnaflux Corp., Chicago, Ill.
STRIKEASY — Direct-current arc welder. General Electric Co., Schenectady, N. Y.
STRIPTEX — Paint, lacquer and enamel stripper. Diversey Corp., Chicago, Ill.
STROCO — Crater eliminator. Flux-plated welding electrodes. Carl Strobel Corp., Los Angeles, Cal.
STRONGCAST — Steel electrode. Hobart Brothers Co., Troy, Ohio.
STRYCO—Spot, seam, flash, projection, bond saw, butt and welders. Stone Ryals Electric and Manufacturing Co., San Francisco, Cal.
STUBBY — Electrode holders. Martin Wells, Los Angeles, Cal.
STURDY-WEAVE — Asbestos clothing, gloves, leggings, aprons, etc. The Safety Equipment Service Co., Cleveland, Ohio.
SULFLO — Solder paste and liquid. Sulflo, Inc., Elizabeth, N. J.
SULKOTE — Electrode. Hobart Brothers Co., Troy, Ohio.
SUN-RAY — Acetylene. Atlas Acetylene Co., Kearny, N. J.
SUPAIRCO — Industrial liquid air, liquid oxygen, oxygen, nitrogen, hydrogen and acetylene plants, liquid air containers and acetylene cylinders. Superior Air Products Co., Newark, N. J.
SUPER — Drill grinding attachment. A. D. McBurney, Los Angeles, Cal.
SUPER — Cutting torches. Modern Engineering Co., Inc., St. Louis, Mo.
SUPER-DREDNAUT — Goggles and lenses. Safety Equipment Service Co., Cleveland, Ohio.
SUPER ALLOY — Hard-facing alloy. Resisto-Loy Co., Grand Rapids, Mich.
SUPER DYNAMITE — Hose. Mulconroy Co., Philadelphia, Pa.
SUPER NICKEL-CLAD STEEL — Clad steel nickel bonded to a base plate of steel. Lukens Steel Co., Coatesville, Pa.
SUPER SERVICE — Portable cables. General Cable Corp., New York, N. Y.
SUPER STAR-MO — Steel of tungsten-moly. Firth-Sterling Steel Co., McKeesport, Pa.
SUPER-TOUGH — Lens used for grinding goggles. Willson Products, Inc., Reading, Pa.
SUPER VISIBILITY — Protective glass for electric welding. Lincoln Electric Co., Cleveland, Ohio.
SUPER-X — Welding and cutting torches. Modern Engineering Co., Inc., St. Louis, Mo.
SUPERCLAMP — Forged steel clamps. Cincinnati Tool Co., Norwood, Cinn., Ohio.
SUPERETTE — Electrode holders. Wagner Manufacturing Co., Inc., Jackson, Mo.
SUPER-DIFOLD — Buffs. Divine Brothers, Co., Utica, N. Y.
SUPEREX — Capacitors. Colar Manufacturing Corp., North Bergen, N. J.
SUPERIOR — Welding and cutting torches, accessories, supplies, acetylene generators, etc. Superior Oxy-Acetylene Machine Co., Hamilton, Ohio.
SUPERIOR — Arc welding hand shield. Welding Engineering Co., Milwaukee, Wis.
SUPERIOR — Paste and powder fluxes. Superior Flux Co., Cleveland, Ohio.
SUPERIOR — Compressed gases. Superior Industrial Gas Corp., Astoria, N. Y.
SUPERPHONE — Telephone used by divers in underwater operations. Craftsweld Equipment Corp., Long Island City, N. Y.
SUPERRENCH — Wrenches. J. H. Williams & Co., Buffalo, N. Y.
SUPERSEAL — Fittings for air lines. Grinnell Co., Inc., Providence, R. I.
SUPERSOCKET—Detachable socket wrenches. J. H. Williams & Co., Buffalo, N. Y.
SUPERWELD NO. 55, NO. 66, NO. 77, AND NO. 88 — Coated arc electrodes. Steel Sales Corp., Chicago, Ill.
SUPERWELD NO. 77A — Coated electrodes. Steel Sales Corp., Chicago, Ill.
SUPRALOY — Hard facing electrodes. Bergstrom Alloys Corp., Reno, Nev.
SUPREME — Round file type spark lighter. Matchless Utilities Co., Brooklyn, N. Y.
SUREGRIP—Electrode holders. Martin Wells, Los Angeles, Cal.
SUREGRIP-INSULATED — Electrode holder. Martin Wells, Inc., Los Angeles, Cal.
SUREGRIP-NON-INSULATED — Electrode holder. Martin Wells, Inc., Los Angeles, Cal.
SUREWELD — Coated arc welding electrodes and welding fluxes. Hollup Corp., Div. National Cylinder Gas Co., Chicago, Ill.
SUREWELD — Carbon electrodes and mild steel. Borm Manufacturing Co., Elgin, Ill.
SURFACEWELD — Grained alloy powder. Lincoln Electric Co., Cleveland, Ohio.
SURFA-SELE — Waterproofing sealer. Rust Oleum Corp., Evanston, Ill.
SVEA — Swedish iron welding wire. Swedish Iron and Steel Corp., New York, N. Y.
SWEAT-ON — Fluxes or alloys for joining materials. Eutectic Welding Alloys Co., New York, N. Y.
SWEDG-ON — Lugs and screws. Wagner Manufacturing Co., Inc., Jackson, Mo.
SWEDOX—Welding rods, electrodes and supplies. Made by Central Steel & Wire Co., Chicago, Ill.
SWIFT — Resistance welding equipment. Swift Electric Welder Co., Detroit, Mich.
SWIFTWELD — Welding electrode. Lincoln Electric Co., Cleveland, Ohio.
SWIRT — Emulsion cleaning solvent. Phillips Manufacturing Co., Chicago, Ill.
SYNCRO-BREAK — Synchronized magnetic contactors. Square D Co., Milwaukee, Wis.
SYNCRO-TIMER — Precision timer. National Time & Signal Corp., Detroit, Mich.
SYNTHITE — Insulating Varnish. John C. Dolph Co., Newark, N. J.
SYNTRON — Chipping and scaling hammers, electric grinders, portable electric drills, portable gas-electric power plants. Syntron Co., Homer City, Pa.

T

TD — Coated electrode. Hollup Corp., Division of National Cylinder Gas Co., Chicago, Ill.
T-J CO. — Preheating annealing and stress relieving furnaces. Tate, Jones & Co., Leetsdale, Pa.
TW — Seamless gas cylinders. Taylor-Wharton Iron and Steel Co., Easton, Pa.
TAKE-ABOUT — Portable electric hand sander. Portable-Cable Machine Co., Syracuse, N. Y.
TAM — Alloys, refractories and cement. Titanium Alloy Manufacturing Co., Niagara Falls, N. Y.
TAMPAIR — Rail backfile tamping outfit. Schramm, Inc., Westchester, Pa.
TANARC — Silicon, titanium, zirconium mineral. Foote Mineral Co., Phila., Pa.

TANDEM — Timer control unit. Industrial Timer Corporation, Newark, N. J.

TANTUNG — Alloy. Also welding rod and cutting tool taps. Fansteel Metallurgical Corp., North Chicago, Ill.

TAYLOR — Spiral and straight-seam welded pipes, forged fittings. Taylor Forge and Pipe Works, Chicago, Ill.

TAYLOR-FORGE — Electric, fusion welded pipe, forged pipe fittings, pipe flanges for welding, welding necks and flanges for tanks and other forged products. Taylor Forge and Pipe Works, Chicago, Ill.

TAYLOR-HALL — Spot welders. The Federal Machine & Welder Co., Warren, Ohio.

TAYLOR-MADE — Chain. S. G. Taylor Chain Co., Hamond, Ind.

TAYLOR-WINFIELD — Resistance spot, projection, seam and flash-butt welding machines. The Taylor-Winfield Corp., Warren, Ohio.

TEMCO — Electric furnaces. Thermo Electric Manufacturing Co., Dubuque, Iowa.

TEMP-A-TROL — Welding equipment. Progressive Welder Co., Detroit, Mich.

TEMPIL PELLETS — Thermometric pellets. Tempil Corp., New York, N. Y.

TEMPIL — Temperature measuring stikes & pellets. Claud S. Gordon Co., Chicago, Ill.

TEMPILAQ — Temperature indicating paint. Tempil Corp., New York, N. Y.

TEMPILSTIKS — Temperature indicating crayon. Tempil Corp., New York, N. Y.

TEMPRITE — Refrigeration products. Temprite Products Corp., Detroit, Mich.

TENS-O-MATIC — Automatic welding wire. Allied Weld-Craft, Inc., Indianapolis, Ind.

TENSOX — Carbon steel. Central Steel & Wire Co., Chicago, Ill.

TEX-DRIVE — Grinders and buffers. The Hisey Wolfe Machine Co., Cincinnati, Ohio.

THERMACOTE — Welding cover lenses, electrode holders and pneumatic air tools, etc. Thermacote Co., Los Angeles, Cal.

THERMIT — Apparatus and materials for alumino-thermic welding. Metal & Thermit Corp., New York, N. Y.

THERMO-LO BLUE WELDING FLUX — Flux. Farrelloy Co., Philadelphia, Pa.

THERMO-LO PINK BRAZING FLUX — Flux. Farrelloy Co., Philadelphia, Pa.

THERMONIC — Generator, etc., for heat treating by means of induction heating. Induction Heating Corp., Brooklyn, N. Y.

THERMOTONIC — Feeding compound for castings. Pittsburgh Metals Purifying Co., Pittsburgh, Pa.

THE WELDER — Leather welding gloves. E. J. Streichert, Chicago, Ill.

THOMPSON — Torch unit for underwater arc cutting. Thompson Engineering Co., Grand Rapids, Mich.

THOMSON — Spot, butt, seam, flash, multimatic spot, fabric welders, and other types of resistance welding machines. Thomson Electric Welder Co., Lynn, Mass.

THOR — Fire brick. Mexico Refractories Co., Mexico, Mo.

THOR — Portable electric and pneumatic tools. Independent Pneumatic Tool Co., Chicago, Ill.

THREDOLETS—Forged pipe welding fittings. Bonney Forge and Tool Works, Allentown, Pa.

3 IN 1 — Portable A-C welder. Tri-Arc Corp., Chicago, Ill.

3M — Sanding discs. R. G. Haskins Co., Chicago, Ill.

THREE-M-ITE — Abrasive cloth. Minnesota Mining and Mfg. Co., St. Paul, Minn.

THYRATRON — Control for spot- and line-welding equipment. General Electric Co., Schenectady, N. Y.

TIGER BRAND — Wire rope. Tennessee Cable, Iron and Railroad Co., Birmingham, Ala.

TIGERWELD — Rail bonds. American Steel and Wire Co., Rockefeller Bldg., Cleveland, Ohio.

TILLMAN — Leather gloves, mittens, garments, and supplies. John Tillman and Co., Long Beach, Cal.

TIMANG — Manganese steel welding rods and electrodes. Taylor-Wharton Iron and Steel Co., High Bridge, N. J.

TIME TAKER — Welding time recorder. The A-C Devices Co., Chicago, Ill.

TIN-EZY — Soldering compound. Johnson Mfg. Co., Inc., Mount Vernon, Iowa.

TIN-EZY — Johnson's metal coating compound. Johnson Mfg. Co., Inc., Mount Vernon, Iowa.

TINOL — Flux powder. American Solder and Flux Co., Philadelphia, Pa.

TIP CLEEN — Tip cleaning compound. Wolfe-Kote Co., Sheboygan, Wis.

TIREX — Rubber sheathed cords and cables. Simplex Wire & Cable Co., Cambridge, Mass.

TISCO — Manganese steel castings and other products. Taylor-Wharton Iron and Steel Co., High Bridge, N. J.

TISCO ALNICO — Alloy of aluminum, nickel and iron. Taylor-Wharton Iron and Steel Co., Easton, Pa.

TITAN — Electric hoist. Detroit Hoist & Machine Co., Detroit, Mich.

TITAN — Deoxidized bronze alloy welding rods and other products. Titan Metal Manufacturing Co., Bellefonte, Pa.

TITANALBA — Titanium dioxide. Foote Mineral Co., Philadelphia, Pa.

TITAN BRONZE—Deoxidized bronze welding rods. Titan Metal Mfg. Co., Bellefonte, Pa.

TITAN MANGANESE BRONZE — Bronze rod. Titan Metal Mfg. Co., Bellefonte, Pa.

TITAN WEARWELL — Rods of bronze. Titan Metal Mfg. Co., Bellefonte, Pa.

TITANOX — Electrode coating material. National Lead Co., New York, N. Y.

TITANOX — Titanium dioxide. Titanium Pigment Corp., New York, N. Y.

TITE-KOTE — Nickel manganese steel electrodes. Stulz-Sickles Co., Newark, N. J.

TNEL — Arc and spot welder. Tnel Manufacturing Co., Hornell, N. Y.

TOBIN BRONZE — Bronze alloy. The American Brass Co., Waterbury, Conn.

TOCCO — Induction heating equipment. The Ohio Crankshaft Co., Tocco Div., Cleveland, Ohio.

TOLMAN — Welding and cutting torches, regulators, accessories and supplies, oxy-acetylene welding and cutting outfits, electrode holders. Tolman Mfg. Co., Boston, Mass.

TOMBAC — Flux for brazing alloy steels and copper. Morey Flux and Chemical Co., Wilmington, Del.

TONCAN IRON — Iron alloy. Republic Steel Corp., Cleveland, Ohio.

TONG TEST — Ammeter. Columbia Electric Mfg. Co., Cleveland, Ohio.

TOOL-ARC — Tool and die electrodes. Alloy Rods Co., York, Pa.

TOOL ARC — Coated electrodes for tools. Universal Welder Corp., Cleveland, Ohio.

TOOL-CRAFT—Tool steel welding electrodes. Allied Weld-Craft, Inc., Indianapolis, Ind.

TOOLFACER — Alloy tool steel welding electrode. Hobart Brothers Co., Troy, Ohio.

TOOLWELD — Shielded arc type welding electrode. The Lincoln Electric Co., Cleveland, Ohio.

TORCHWELD — Welding and cutting torches and regulators. Torchweld Equipment Division, National Cylinder Gas Co., Chicago, Ill.

TORIT — Air-gas torches, acetylene torches for brazing and soldering; dust collectors and fume exhausters. Torit Manufacturing Co., St. Paul Minn.

TORRENT — Power spray washer. Phillips Manufacturing Co., Chicago, Ill.

TOTRUST — Rust preventive. The Wilbur & Williams Co., Boston, Mass.

TOTRUST ENAMEL — Abrasion resistant coating. The Wilbur & Williams Co., Boston, Mass.

TOTRUST PRIMER SURFACER — Rust preventive filler. The Wilbur & Williams Co., Boston, Mass.

TOUGH DEVIL — Manganese-nickel electrodes. The Champion Rivet Co., Cleveland, Ohio.

TOURNACAR — Welding truck. R. G. LeTourneau, Inc., Peoria, Ill.

TOURNAWELD — Welding and hard-facing electrodes. R. G. LeTourneau, Inc., Peoria Ill.

TOURNA WELD 77 — Welding rod. R. G. LeTourneau, Inc., Peoria, Ill.

TOURNA WELD 78 — Welding rod. R. G. LeTourneau, Inc., Peoria, Ill.

TOURNA WELD 88 — Welding rod. R. G. LeTourneau, Inc., Peoria, Ill.

TOURNA WELD HF — Welding rod. R. G. LeTourneau, Inc., Peoria, Ill.

TOURNA WELD RW — Welding rod. R. G. LeTourneau, Inc., Peoria, Ill.

TRAKALOY — Hard-facing impact electrodes. Bergstrom Alloys Corp., Reno, Nev.

TRANS-ARC — Transformer-type arc welder. American Transformer Co., Newark, N. J.

TRANSITE — Asbestos-cement pipe. Johns-Manville, New York, N. Y.

TRANSPO — Metal and parts cleaner. Turco Products, Inc., Los Angeles, Cal.

TRAVEL-CUT — Wire straightening and cutting machine. The Lewis Machine Co., Cleveland, Ohio.

TRAVOGRAPH — Oxy-acetylene cutting machine. Aid Reduction Sales Co., New York, N. Y.

TRENTWELD — Stainless steel and inconel tube (⅛-22" diam. thin wall). Trent Tube Manufacturing Co., East Troy, Wis.

TRIAD — Pipe thread stocks and dies. Nye Tool Co., Chicago, Ill.

TRI-ARC — Carbon arc torch. Tri-Arc Corp., Chicago, Ill.

TRIBLOC — Chain hoists. Ford Chain Block, Div. of Amer. Chain & Cable Co. Inc., York, Pa.

TRI-CORE — Soldering wire. Alpha Metals, Inc., Brooklyn, N. Y.

TRIDENT — Steel chains, slings and drill press combination and multi-vise. Newhall Chain Forge & Iron Co., Westwood, N. J.

TRI-FLUX — Soldering flux. Wolfe-Kote Co.,

TRI-FLUX NO. 3 — Liquid soldering flux. Wolfe-Kote Co., Sheboygan, Wis.

TRI-FLUX NO. 5 — Liquid soldering flux. Wolfe-Kote Co., Sheboygan, Wis.

TRI-FLUX NO. 20 — Liquid soldering flux. Wolfe-Kote Co., Sheboygan, Wis.

TRI-LINE — Welding hose. Burdett Oxygen Co., Cleveland, Ohio.

TRIMO — Pipe cutters, monkey wrenches, pipe vises and saw vise for tubing. Trimont Manufacturing Co., Roxbury, Mass.

TRIMO-ALLOY — Pipe wrench. Trimont Manufacturing Co., Roxbury, Mass.

TRINDL SUPER — A-C transformer type arc welders, arc torches, welding helmets and handshields. Trindl Products, Ltd., Chicago, Ill.

TRIPL-FLINT — Torch lighter. Modern Engineering Co. Inc., St. Louis, Mo.

TRIPLEX — Pipe threading stock. Nye Tool Co., Chicago, Ill.

TRIPLE "A" — Safety signs. The Acromark Co., Elizabeth N. J.

TRODALOY — Electrode material for resistance welding. General Electric Co. patents by Ampco Metal, Inc., Milwaukee, Wis.; Electroloy Co., New York, City; P. R. Mallory Co., Indianapolis, Ind.; Welding Sales and Engineering Co., Detroit, Mich.

TROJAN — Mono rail tractor. Detroit Hoist and Machine Co., Detroit, Mich.

TROXIDE — Dry acid pickling compound. Waverly Petroleum Products Co., Philadelphia, Pa.

TRU-FLUX — Soldering syrup. American Chemical Process Co., Long Island City, N. Y.

TRU-LAY — Wire roper. American Cable Div. of American Chain & Cable Co., Inc., Wilkes Barre, Pa.

TRUMARK — Protractors. Tru-line Corp., Santa Monica, Cal.

TRUMBULL—Magnetic contactors and electric safety switches. The Trumbull Electric Manufacturing Co., Plainville, Conn.

TRY-2-RIP — Leather palm welder. Montpelier Glove Co., Montpelier, Ind.

TU-LINE — Welding hose. Quaker Rubber Corp., Philadelphia Pa.

TUBE BORIUM — Hard-facing rod. Stoody Co., Whittier, Cal.

TUBE-O-FLUX — Silver brazing alloy kits. American Products Corp., Chicago, Ill.

TUBE-TURNS — Forged steel fittings, forged steel flanges. Tube Turns, Louisville, Ky.

TUC-AWAY — Spectacle type safety goggles. Watchemoket Optical Co. Inc., Providence, R. I.

TUFANHARD — Hard-facing electrode. Hobart Brothers Co., Troy, Ohio.

TUFFALOY — Resistance welding electrodes. Welding Sales & Engineering Co., Detroit, Mich.

TUFFLINE — Welding resistor units, junction boxes, welding cable connector and weldors' portable hand lights. C. H. Stevens & Co., South Norwalk, Conn.

TUFF WELDER — Leather welding gloves. E. J. Streichert, Chicago, Ill.

TUFWELD — Lenses. Sellstrom Mfg. Co. Chicago, Ill.

TUGIT — Ratchet lever hoists. Manning, Maxwell & Moore, Inc., Muskegon, Mich.

TUKON — Hardness testers. Wilson Mechanical Instrument Co., Inc., New York City.

TU-LINE — Welding hose. Quaker Rubber Corp., Philadelphia, Pa.

TUNG-ALLOY — A hard surfacing alloy. The Resisto-Loy Co., Grand Rapids, Mich.

TUNGSWELD — Squaring shears. Simonds Saw & Steel Co., Fitchburg, Mass.

TUNGWELD — Welding electrodes. The Lincoln Electric Co., Cleveland, Ohio.

TURCO AGITON — A compound for cleaning metals. Turco Products, Inc., Los Angeles, Cal.

TURCO AIRLION 81 — Compound for cleaning metals. Turco Products, Inc., Los Angeles, Cal.

TURCO CONSISTO-WELD — Preparation of aluminum alloys for spot welding. Turco Products, Inc., Los Angeles, Cal.

TURCO VULCO-ETCH — Preparation of aluminum for spot welding. Turco Products, Inc., Los Angeles Cal.

TURNER — Blow torches and fire pots. Turner Brass Works, Sycamore, Ill.

TURRETYPE — Arc welding shields. Dockson Corp., Detroit, Mich.

TWECO — Electrode holders, cable lugs, ground clamps, ground hooks, wedges and cable connectors. Tweco Products Co., Wichita, Kan.

TWECOLUG — Welding cable lug. Tweco Products Co., Wichita, Kan.

TWECO-SPLICER — Welding cable splicer. Tweco Products Co., Wichita, Kan.

TWECOTONG — Welding electrode holders. Tweco Products Co., Wichita, Kan.

TWEEZER WELD — Automic and bench spot welders. Tweezer Weld Corp., Newark, N. J.

TWENTIETH CENTURY — A-C type arc welder. Twentieth Century Welder Mfg. Co., Minneapolis, Minn.

25-20 STAINLESS — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TWIN THERMATORCH — Carbon arc torch. Plymouth Equipment & Supply Co. Plymouth, Mich.

TWINWELD — Double hose molded into a single unit. Hewitt Rubber Corp., Buffalo, N. Y.

TWISTITE — "C" clamp with a positive ground cable connection used as a ground clamp. National Clamp Co., Jackson, Mich.

TWO-BEE CLEANER — Metal cleaner. Nu Steel Co., Chicago, Ill.

TWO-TONE HC — Alloyed high carbon rod. Resisto-Loy Co., Grand Rapids, Mich.

TWO-TONE TH — Alloyed rod. Resisto-Loy Co., Grand Rapids, Mich.

TYPE A — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TYPE AWL — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TYPE CF — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TYPE CT — Tubular steel electrode. Metal & Thermit Corp., New York, N. Y.

TYPE CW — Waterproofed electrode for underwater welding and cutting. Metal & Thermit Corp., New York, N. Y.

18-8 MO — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TYPE F ELECTRODE — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TYPE FHP ELECTRODE — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TYPE HTS — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TYPE M — Arc welding electrode. Metal & Thermit Corp., New York N. Y.

TYPE MA — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TYPE N — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TYPE 90 — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TYPE 135—DUSTCOAT-ROD — Electrodes. Marquette Mfg. Co., Minneapolis Minn.

TYPE RC — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TYPE 347 — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TYPE 310 — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

TYPE S — Work-hardening electrodes. Bergstrom Alloys Corp., Reno, Nev.

TYPE U — Arc welding electrode. Metal & Thermit Corp., New York, N. Y.

U

U ALLOY — White metal welding rod. Universal Power Corp., Cleveland, Ohio.

UCC — Welding products. Union Carbide and Carbon Corp., New York N. Y.

U-LOY — Copper bearing steel sheets. Republic Steel Corp., General Offices, Cleveland Ohio.

U. S. — Welding, cutting, lead burning and carbon removing equipment, acetylene generators, preheating torches, accessories and supplies. Harris Calorific Co., Cleveland, Ohio.

U. S. — A-C arc welders and electrode holders. U. S. Electric Welder Corp., Toledo, Ohio.

U. S. AUTOMATIC — Automatic welding, brazing and cutting torches. Harris Calorific Co., Cleveland, Ohio.

U. S. G. — Gauges. U. S. Gauge, Div., American Machine and Metals, Inc., Sellersville, Pa.

U. S. ROYAL WELDING CABLE — Welding cable. United States Rubber Co., New York, N. Y.

USS — Steel products. United States Steel Corp.

U-CAN-DO — Aluminum solder. J. M. Ragle, Inc., Kansas City, Mo.

ULTRA-SPEED — Multiple spot welding. Federal Machine and Welder Co., Warren, Ohio.

UNA — Automatic arc welding heads and automatic welding wire and flux. Una Welding, Inc., East Cleveland, Ohio.

UNION — Calcium carbide. Dominion Oxygen Company, Ltd., Toronto, Ont., Canada.

UNION CARBIDE — Calcium carbide. The Linde Air Products Co., New York, N. Y.

UNIONMELT — Welding equipment for submerged melt welding. Linde Air Products Co., New York, N. Y.

UNI-PULSE — Condenser discharge spot and seam welder. Federal Machine and Welder Co., Warren, Ohio.

UNIQUE — Preheating torches burning either kerosene or gasoline. Unique Manufacturing Co., Chicago, Ill.

UNISHEAR — Electrically driven hand shears. Stanley Electric Tools, New Britain, Conn.

UNITED — Portable fume exhausters. United Blower Co., Inc., New York, N. Y.

UNITED STATES GAUGE — Oxy-acetylene gauge. United States Gauge Div., American Machine and Metals, Inc., Sellersville, Pa.

UNIVERSAL — Hydraulic jacks. Richard Dudgeon, Inc., New York, N. Y.

UNIVERSAL — Machine for inserting and removing valves from compressed gas cylinders. Independent Engineering Co., O'Fallon, Ill.

UNIVERSAL — Spark lighter. Matchless Utilities Co., Brooklyn, N. Y.

UNIVERSAL — Metalspray gun. Metalspray Co., Los Angeles, Cal.

UNIVERSAL — Welding torch. National Cylinder Gas Co., Chicago, Ill.

UNIVERSAL — Welding rods and spot welders. Universal Welder Corp., Cleveland, Ohio.

UNIVERSAL — Welding ground clamp. Mueller Electric Co., Cleveland, Ohio.

UNIVERSAL — Welding position and abrasive belt sander. Pronson Machine Co., Arcade, N. Y.

UNIVERSAL PRESSURE — Welding and cutting torches. Harris Calorific Co., Cleveland, Ohio.

UPTON — Heat treading furnaces. Commerce Pattern & Machine Co. Detroit, Mich.

UTIL-A-TOOL — Push and pull jacks. Templeton, Kenly & Co., Inc., Chicago, Ill.

V

VALVALOY — Cast high alloy material. Wearaloy Co., Los Angeles, Cal.

VALVE-ALLOY — Impact resistant alloy. Resisto-Loy Co., Grand Rapids, Mich.

VANCO — Percussive butt welders. The Taylor-Winfield Corp., Warren, Ohio.

VANDE — Metallizing gun; air regulator and fitter; wire feeding machine; spray lathe and shaft repairing tool. Vande Manufacturing Co., Chicago, Ill.

VAN DORN — Chipping hammers and tools, bench grinders, portable electric grinders, grinding wheels, sanders and surfacers. Van Dorn Electric Tool Co., Towson, Md.

VANGTRONIC — Bench type spot welders. Vangtronic Corp., Bridgeport, Conn.

VANOX — Vanadium steel rod. Central Steel & Wire Co. Chicago, Ill.

VARI-LINE — Cable connectors. Burndy Engineering Co., New York, N. Y.

VELOCITY POWER — Cable splicers. Mine Safety Appliances Co., Pittsburgh, Pa.

VENTA-MINE — Exhaust fans. Guyan Mach. Co., Logan, W. Va.

VERSI-LINK — Connector. Burndy Engineering Co., New York, N. Y.

VERSI-LUG — Clamp type lug. Burndy Engineering Co., New York, N. Y.

VERSI-TAP — T-connector. Burndy Engineering Co., New York, N. Y.

VERSON — Press brakes, mechanical and hydraulic presses, die cushions. Verson Allsteel Press Co., Chicago, Ill.

VERTEX — Arc welding electrode. Metal & Thermit Corp. New York, N. Y.

VEVAC — Underwater jetting nozzle. Craftsweld Equipment Corp., Long Island City, N. Y.

VIBRA WELD — Cold welder and bonder. Mid-States Equipment Corp., Chicago, Ill.

VIBRO-ARC — Magnetic motor driven electrode holder. Glenn-Roberts Co., Oakland, Cal.

VICEPRESS — Combination hydraulic vice and press. Studebaker Machine Co., Chicago, Ill.

VICPHOSCO — Phosphor bronze electrodes. Victor Equipment Co., San Francisco, Cal.

VICSILCO — Silicon bronze electrodes. Victor Equipment Co., San Francisco, Cal.

VICTOR — Hose. Mulconroy Co., Philadelphia, Pa.

VICTOR — Welding and cutting torches, pressure reducing regulators, flowmeters, acetylene gas generators, cylinder manifolds, welding rods and electrodes, fluxes, electrode holders accessories and supplies. Victor Equipment Co., San Francisco, Cal.

VICTOR — A-C welders and welding cable. Victor Welding and Mfg. Co., New York N. Y.

VICTORY POINTS — Grinding wheels. Simonds Abrasive Co., Philadelphia, Pa.

VICTROMETER — A flowmeter for pressure regulators. Victor Equipment Co., San Francisco, Cal.

VIKING — Fire brick. Mexico Refractory Co., Mexico, Mo.

VICE-GRIP — Welding clamps; wrenches; pliers and wire cutter pliers. Paterson Manufacturing Co., Inc., De Witt, Neb.

VISE MASTER — Vises. Grand Specialties Co., Chicago, Ill.

VISE WRENCH — Quick-acting toggle type wrench. Knu-Vise, Inc., Detroit, Mich.

VULCAN — Electrode holders. The Fibre-Metal Products Co., Chester, Pa.

VULCAN — Stress relieving furnaces. Vulcan Corp., Philadelphia, Pa.

VULCAN UNIVERSAL — Brazing outfits, burners, tips, torches and regulators. Purity Cylinder Gases Inc., Grand Rapids, Mich.

VULCOID — Material used in the head harness of welder's helmets. Sellstrom Mfg. Co., Chicago, Ill.

W

W BOROLON — Grinding wheels. Simonds Abrasive Co., Philadelphia, Pa.

W. O. NO. 1 — Rust remover. Turco Products, Inc., Los Angeles, Cal.

W & W PENETRATING OIL — Lubricant. The Wilbur & Williams Co., Boston, Mass.

WW-1 — Resistance welding electrodes. Weiger, Weed & Co., Detroit, Mich.

WW-2 — Resistance welding electrodes. Weiger, Weed & Co., Detroit, Mich.

WW 3 — Resistance welding electrodes. Weiger, Weed & Co., Detroit, Mich.

WW-5 — Resistance welding electrodes. Weiger, Weed & Co., Detroit, Mich.

WW-7 — Resistance welding electrodes. Weiger, Weed & Co., Detroit, Mich.

WW-8 — Resistance welding electrodes. Weiger, Weed & Co., Detroit, Mich.

WAITCUS — Spot welder. The Central Sales Corp., Chicago, Ill.

W-AL-CO — Welding fluxes, welding lenses and aluminum electrodes. Welding Alloys Mfg. Co., Newark, N. J.

WALL — Oxygen, acetylene, hydrogen and equipment. Wall Chemicals Div., The Liquid Carbonic Corp., Chicago, Ill.

WARCO — Presses and press brakes. The Federal Machine & Welders Co., Warren, Ohio.

WARWICK — Slings, chains, etc. Newhall Chain Forge & Iron Co., Westwood, N. J.

WASP — Electric arc welder. Wilson Welder and Metals Co., New York, N. Y.

WAVERLESS FLAME — Oxygen regulator of the 2-stage or multi-stage type. K-G Welding & Cutting Co., Inc., New York, N. Y.

WEAR ARC — Electrodes, hard facing. Alloy Rods Co. York, Pa.

WEID-ARC — Electrodes, high tensile, low hydrogen, mild steel. Alloy Rods Co., York, Pa.

WEARALOY — Cast alloy rods. Wearaloy Co. Los Angeles, Cal.

WEAR-CRAFT — Manganese-nickel electrodes. Alied Weld-Craft, Inc., Indianapolis, Ind.

WEAR DEVIL — Hard-facing electrodes. Champion Rivet Co., Cleveland, Ohio.

WEAR DEVIL "A" — Hard surfacing. The Champion Rivet Co., Cleveland, Ohio.

WEAREVER — Scratch brush. Universal Power Corp., Cleveland, Ohio.

WEARWELD — Welding electrode. Lincoln Electric Co., Cleveland, Ohio.

WEBB — Plate bending rolls. The Webb Corp., Webb City, Mo.

WEBB STEELWORKER — Combination punch and shear. The Webb Corp., Webb City, Mo.

WEGEWELL — Bronze welding rods. Titan Metal Mfg. Co., Bellefonte, Pa.

WEIGER-WEED — Resistance welding electrodes. Fansteel Metallurgical Corp., N. Chicago Ill.

WEIGER-WEED — Resistance welding electrodes. Weiger, Weed & Co., Division of Fansteel Metallurgical Gorp., Detroit, Mich.

WELCO — Cylinder neck rings and fluxes. Welding Gas Products Co., Chattanooga, Tenn.

WELCO — Safety goggles. Welsh Mfg. Co., Providence, R. I.

WELDA — Welding lenses. Harry Buegeleisen, Inc., Brooklyn, N. Y.

WELD-A-CAST — Fluxes for oxy-acetylene welding. Cortland Welding Compound Co., Cortland, N. Y.

WELDCO — Arc welding electrodes, arc welders and accessories. Welding Service Sales, Inc., San Francisco, Cal.

WELD-CRAFT — Hard-facing electrodes. Allied Weld-Craft, Inc., Indianapolis, Ind.

WELDER — A. C. arc welding generator. The A. C. Devices Co., Chicago, Ill.

WELD-CUT-PAL KIT — Welding and cutting outfits. Burdett Oxygen Co., Cleveland, Ohio.

WELDELL — Forged steel pipe fittings. Taylor Forge and Pipe Works, Chicago, Ill.

WELDERS ELGIN — Welding rods. Borm Manufacturing Co., Elgin, Ill.

WELDER'S MOULDING COMPOUND — Carbon compound. Harris Calorific Co., Cleveland, Ohio.

WELD-FAST — Trade name for bronze welding rods. Revere Copper and Brass, Inc., New York, N. Y.

WELD FLUX SCALER — Air chisel equipment. The Dallett Co., Philadelphia, Pa.

WELD-O-TROL — Electronic controls, seam and spot welding contactors. Westinghouse Electric Corp., E. Pittsburgh, Pa.

WELDER'S EYE LOTION — Eye lotion. Ashton's Drug Stores, Youngstown, Ohio.

WELDER'S PAL — Eye drops. Carhoff Co., Cleveland, Ohio.

WELDERULE — Slide rule. General Electric Co., Schenectady, N. Y.

WELDERZ FREND — Acetylene generator. Welderz-Frend Generator Co., Lubbock, Texas.

WELDEX — Resistance welding machines. Weldex Inc., Detroit, Mich.

WELDFLO — Coated welding electrodes. Williams and Co., Inc., Pittsburgh, Pa.

WELDIN AUTOMATIC TORCH — Automatic welding torch. Weldit, Inc., Detroit, Mich.

WELDING MACHINES — Spot, seam, gun, projection and multi-spot resistance welding. Welding Machines Mfg. Co., Detroit, Mich.

WELDIT — Welding and torches, supplies, accessories, etc. Weldit, Inc., Detroit, Mich.

WELDIT AUTOMATIC BLOWPIPE — Automatic blowpipe. Weldit, Inc., Detroit, Mich.

WELDIT GASAVER — Valves. Weldit, Inc., Detroit, Mich.

WELDITE — Electrodes and welding rods. Chicago Steel and Wire Co., Chicago, Ill.

WELDMASK — Compound. Turco Products, Inc., Los Angeles, Cal.

WELDMASTER — Welding equipment. Modern Engineering Co., Inc., St. Louis, Mo.

WELDMORE — Carbon arc welding, electrode. Lincoln Electric Co., Cleveland, Ohio.

WELDOLETS — Welding fittings. Bonney Forge and Tool Works, Allentown, Pa.

WELDOLOY — Welding and brazing alloys. Weldoloy Mfg. Co., New York, N. Y.

WELDOMATIC — Automatic arc welding head, control and machines. Westinghouse Electric Corp., East Pittsburgh, Pa.

WELDOR'S — A-C arc welding generator. The A-C Devices Co., Chicago, Ill.

WELD-O-TRON — D-C precision, low current arc welder. Allis Chalmers Mfg. Co., Milwaukee, Wis.

WELD PROBER — Portable machine for removing specimens from butt welded mild steel. The Fibre-Metal Products Co., Chester, Pa.

WELDRITE POROSEAL — Compound. Electric Welding Machine Co., Detroit, Mich.

WELDRITE WELDERS — Seam, arc spot and butt electric welding machines. Electric Welding Machine Co., Detroit, Mich.

WELD-ON — Plow share edges, cultivator points, lister share points, planter runner edges, etc. Osmundson Spade Mfg. Co., Perry, Ia.

WELD-O-TRON — Electronic arc welder. Allis-Chalmers Mfg. Co., Milwaukee, Wis.

WELD-PROBER — Portable machine to examine the quality and soundness of the weld. The Fibre-Metal Products Co., Chester, Pa.

WELSHADE — Welding lenses of spectacle type goggles. Welsh Mfg. Co., Providence, R. I.

WELSHARD — Lens for chipping. Welsh Manufacturing Co., Providence, R. I.

WELSHWELD — Welding plates. Welsh Mfg. Co., Providence, R. I.

WEN-LYN — Air hammer. Wen-Lyn Products, Burbank, Cal.

WESLEY — Welding cement. Wesley Lacquer Co., Brooklyn, N. Y.

WELTRONIC—Electronic controls. Weltronic Co., Detroit, Mich.

WESTINGHOUSE — Electric arc welding equipment. Westinghouse Electric Corp., E. Pittsburgh, Pa.

WHARTON—Gas cylinders for oxygen, hydrogen, etc. Taylor-Wharton Iron and Steel Co., Easton, Pa.

WHEELER — Plow points. Star Mfg. Co., Division of Illinois Iron & Bolt Co., Carpentersville, Ill.

WHEELRITE — Cylinder trucks. Weldrite Co., Inc., Long Island City, N. Y.

WHEELRITE No. 3—Cylinder handling truck. Made by Weldrite Co., Inc., Long Island City, N. Y.

WHIPPET—Electric hoists. Ford Chain Block Div. of Amer. Chain & Cable Co., Inc., York, Pa.

WHIRLWIND — Air cooling system. Ergolyte Mfg. Co., Philadelphia, Penna.

WHIRLWIND—Wire wheel brushes. Van Dorn Electric Tool Co., Towson, Md.

WHITE FLASH — Shielded arc electrodes. Central Steel and Wire Co., Chicago, Ill.

WHITE FLUX COATED 18-8 STAINLESS STEEL — Steel Sales Corp., Chicago, Ill.

WHITTEMORE — Strain gauge. Baldwin Southwark Division, The Baldwin Locomotive Works, Philadelphia, Pa.

WHIZ — Compound R.M. Hollingshead Corp., Camden, N. J.

WICKWIRE — Wire rope slings. Wickwire Spencer Steel Co., New York, N. Y.

WIESE WORLD BRAND — Cultivator shovels and sweeps. Wiese Plow Welding Co., Perry, Iowa.

WIL-WELD — Welding fluxes. Tolman Manufacturing Co., Boston, Mass.

WILLIAMS — Wrenches. J. H. Williams & Co., Buffalo, N. Y.

WILLIAMS — Welding wire, accessories and supplies. Williams & Co., Pittsburgh, Pa.

WILSON — Electric arc welding machines, electrodes, accessories, and supplies. Wilson Welder & Metals Co., Inc., New York, N. Y.

WILLSON — Goggles, respirators, gas masks, welding helmets, shields, etc. Willson Products, Inc., Reading, Pa.

WILLSONITE SUPER-TOUGH — Glass used for welding goggles. Willson Products, Inc., Reading, Pa.

WILLSON-WELD — Glass used for welding goggles and helmets. Willson Products, Inc., Reading, Pa.

WILMINGTON FIBRE — Vulcanized fibres available in sheets, rods, tubes and shapes, such as electrode holder handles, knobs, washers, shims, etc. Wilmington Fibre Specialty Co., New Castle, Wilmington, Del.

WILTON — Vises. Wilton Tool Manufacturing Co., Chicago, Ill.

WINGFOOT — Corrugated welding hose. Goodyear Tire and Rubber Co., Inc., Akron, Ohio.

WINTERGARDE — Fire extinguisher. Pyrene Manufacturing Co., Newark, N. J.

WISSCO — Gas and electric welding wire. Wickwire Spencer Steel Co., New York, N. Y.

WITT — Welding gas pressure gauges. Witt Gauge Co., Eau Claire, Wis.

WIZARD — Tape rule. The Lufkin Rule Co., Saganaw, Mich.

WORK SHOP KIT — Welding outfits. Burdett Oxygen Co., Cleveland, Ohio.

WOW No. 700 — Brazing rod. Wow Welding Specialties Co., Chicago, Ill.

WRIGHT — Chain hoists. Wright Hoist Div. of Amer. Chain & Cable Co., Inc., York, Pa.

WW-1W-RWMA — Resistance welding electrodes. Weiger Weed & Co., Detroit, Mich.

WW-10W-RWMA — Resistance welding electrodes. Weiger Weed & Co., Detroit, Mich.

WW-20W-RWMA — Resistance welding electrodes. Weiger Weed & Co., Detroit, Mich.

WW-100W-RWMA — Resistance welding electrodes. Weiger Weed & Co., Detroit, Mich.

WW STERLITH — Grinding wheel. Sterling Grinding Wheel Div., The Cleveland Quarries Co., Tiffin, Ohio.

WYCO — Flexible shafts, flexible shaft grinders, buffers, machines, speed saws & grinding wheels. Wy Zenbeck & Staff, Inc., Chicago, Ill.

WYPO — Welding and cutting torch tip cleaners. Maitlen & Benson, Inc., Long Beach, Cal.

X

X-54 — Paint, lacquer and enamel stripper. Diversey Corp., Chicago, Ill.

X-CEL-FLUX — Welding and brazing fluxes. American Products Corp., Chicago, Ill.

X FLEX — Welding cables. Universal Welder Corp., Cleveland, Ohio.

XL — Hardened lenses. Sellstrom Mfg. Co., Chicago, Ill.

XX SPECIAL — Welding rods. K-G Welding & Cutting Co., Inc., New York, N. Y.

XCEL-FLUX — Welding and brazing fluxes. American Products Co., Chicago, Ill.

XTRA-LITE — Plastic cover lens. Sellstrom Mfg. Co., Chicago, Ill.

Y

YANKEE — Firehose. Quaker Rubber Corp., Philadelphia, Pa.

YELLOW JACKET — Electric arc welder. Wilson Welder and Metals Co., New York, N. Y.

YELLOW STRAND — Wire rope. Broderick & Bascom Rope Co., St. Louis, Mo.

YELLOW-STRIPE — Aluminum oxide, papers and cloth. Clover Mfg. Co., Norwalk, Conn.

YORK — Brazing flux, tinning compound, boiler and radiator compound. York Engineering Co., Chicago, Ill.

YORK No. 77 — Cast iron brazing flux. York Engineering Co., Chicago, Ill.

YORK'S TINNING COMPOUND — Tinning compound. York Engineering Co., Chicago, Ill.

YULCAN — Chain pipe vices and tongs, clamps. J. H. Williams & Co., Buffalo, N. Y.

Z

Z NICKEL — Nickel heat treatable alloy. The International Nickel Co., New York, N. Y.

ZIPPER — A-C arc welder. Mid-States Equipment Corp., Chicago, Ill.

ZIPPER-ET — A-C arc welder. Mid-States Equipment Corp., Chicago, Ill.

ZYGLO — Inspection equipment and metals. Magnaflux Corp., Chicago, Ill.

NAMES AND ADDRESSES

IN this section are arranged alphabetically the names of manufacturers of welding equipment, tools and supplies whose products are listed in the Classified List, together with their addresses. Only one address is given for each company, that being its main or general sales office, or the one otherwise specified by the company —except where manufacturing activities are so divided between two or more plants of a company that certain lines are produced in one plant while others are made elsewhere and orders should be placed according to the plants in which they are manufactured.

Disregard individual's initials or the word "The" in locating the name of a manufacturer. The name of a company such as D. B. Gorbound & Co. would be listed "Gorbound, D. B., & Co." Where the prefix "The" is used, a company is listed as follows: "Morgan Co., The." Where initials form the main part of a name, as, for instance, "B. & R. Pipe Co." the names of such companies are grouped with others of a similar type at the start of listings appearing under the first initial. For instance, "B. & R. Pipe Co." would be found among the first few names appearing under "B."

For convenience, we have generally used "Co." instead of "Company" and "Corp." instead of "Corporation," regardless of whether the company or corporation spells out the word. Similarly, we use "Inc." uniformly instead of "Incorporated."

A

A-A Welding Supply Co., 9228 S. Ada St., Chicago 20, Ill.
A-C Devices Co., 8006 S. Champlain St., Chicago 19, Ill.
Abrasive Products Inc., 110 Pearl St., South Braintree, Mass.
Ace Drill Corp., 13835 Jennings St., Detroit 27, Mich.
Acetogen Gas Co., 2720 East Grand Blvd., Detroit, Mich.
Acetylene Co. of Utah, 366 W. Fifth St., N., Salt Lake City 3, Utah.
Acetylene Gas Co., 3401 Pine Blvd., St. Louis 3, Mo.
Acetylene Service Co., 1105 Zuni St., Denver 4, Colo.
Acme Elec. Welder Co., 2618 Fruitland St., Los Angeles 11, Calif.
Acme Mfg. Co., 1645 Howard St., Detroit 16, Mich.
Acme White Lead & Color Works, 8250 St. Aubin Ave., Detroit 11, Mich.
Acro Welder Mfg. Co., 1825 West St. Paul Ave., Milwaukee 3, Wisc.
Acromark Co., 9-13 Morrell St., Elizabeth 4, N. J.
Actarc Inc., 5806 Hough Ave., Cleveland 3, Ohio.
Adams Alloy Company, Wakita, Okla.
Adams Mfg. & Supply Co., 1522 No. Indiana St., Los Angeles 33, Calif.
Adjustable Clamp Co., 412 North Ashland Ave., Chicago 22, Ill.
Adler Mfg. Co., 5085 N. Broadway, Chicago, Ill.
Advance Glove Mfg. Co., 901 W. LaFayette St., Detroit, Mich.
Aeroil Burner Co., 57th St. & Park Ave., West New York, N. J.
Aerovox Corp., New Bedford, Mass.
Aget Detroit Co., 602 First Natl. Bk. Bldg., Ann Arbor, Mich.
Agnew Electric Co., 125 S. Main St., Milford, Mich.
Air Filter Corp., 2514 W. Lisbon Ave., Milwaukee 5, Wisc.
Air Products, Inc., P. O. Box 538, Allentown, Pa.
Air Reduction Sales Co., 60 E. 42nd St., New York 17, N. Y.
Aircraft Standard Parts Co., 41 S. 6th St., Newark 7, N. J.
Aircraft Tools, Inc., 2306 E. 38th St., Los Angeles 11, Calif.
Ajax Elec. Co., Inc., Frankford Ave. at Delaware Ave., Phila. 23, Pa.
Ajax Electrothermic Corp., Ajax Park, Trenton 5, N. J.
Ajax Metal Co., 46 Richmond St., Philadelphia 23, Pa.
Akron Bronze & Aluminum Co., The, 579 Washington St., Akron, Ohio.
Aladdin Rod & Flux Mfg. Co., P. O. Box 935, Madison Sq. Sta., Grand Rapids, Mich.
Albertson Co., 3100 Lowell Ave., Sioux City 3, Iowa.
Alcasco Foundry & Manufacturing Co., 14823 Loomis St., Harvey, Ill.
Alemite Div., Stewart-Warner Corp., 1826 Diversey Pkwy., Chicago 14, Ill.
Aljay Mfg., Co., Inc., 1230 Vine St., Philadelphia 7, Pa.
All-State Welding Alloys Co., Inc., 96 W. Post Rd., White Plains, N. Y.
Allegheny Ludlum Steel Corp., H. W. Oliver Bldg., Pittsburgh 22, Pa.
Allen Elec. & Equip. Co., 2101-2117 N. Pitcher St., Kalamazoo 13, Mich.
Allen Co., L. B., 6730 Bryn Mawr Ave., Cihcago 31, Ill.
Allen Mfg. Co., W. D., 566 W. Lake St., Chicago, Ill.
Allen Optical Co. 17 Allen St., Buffalo 2, N. Y.
Allied Products Co., 1133 Newport Ave., Chicago 13, Ill.
Allied Weld-Craft Inc., 401 W. South St., Indianapolis 4, Ind.
Allis-Chalmers Mfg. Co., 1126 S. 70th St., Milwaukee 1, Wisc.
Allison Tool & Engrg. Co., 4031 Whittier Blvd., Los Angeles 23, Calif.
Allmand Bros. Mfg. Co., 1315 4th Ave., Holdrege, Nebr.
Alloy Ring Service, 401 E. 30th St., Indianapolis 5, Ind.
Alloy Rods Co., York, Pa.
Alloy Specialties Co., 2441 Waverly Ave., Swissvale 18, Pa.
Alloy Sprayer Co., 602 First Natl. Bk. Bldg., Ann Arbor, Mich.
Alpha Metals, Inc., 363 Hudson Ave., Brooklyn 1, N. Y.
Alphil Spot Welder Mfg. Co., 1058 Pacific St., Brooklyn 16, N. Y.
Aluminum Co. of America, 801 Gulf Bldg., Pittsburgh 19, Pa.
Aluminum Solder Corp., 10 E. 52nd St., New York 22, N. Y.
Alwarth Chemical Corp., 366 Madison Ave., New York, N. Y.
American Agile Corp., 5806 Hough Ave., Cleveland 3, Ohio.
American Allsafe Co., Inc., 1245 Niagara St., Buffalo 13, N. Y.
American Arc Welders, Inc., Roseau, Minn.
American Blower Corp., Box 58, Roosevelt Park Annex., Detroit, Mich.
American Brass Co., The, 414 Meadow St., Waterbury 88, Conn.
American Cable Div. of American Chain & Cable Co., Inc., Wilkes Barre, Pa.
American Car & Foundry Co., 30 Church St., New York 8, N. Y.
American Carbide & Chem. Co., 3411 Pine St., St. Louis 3, Mo.
American Chain Div. of American Chain & Cable Co., Inc., P. O. Box 792, York, Pa.
American Chemical & Flux Co., 105 Lorimer St., Brooklyn 6, N. Y.
American Compressed Gas Products Inc., 5300 S. Hanna St., Ft. Wayne 5, Ind.
American Crayon Co., The, 1706 Hayes Ave., Sandusky, Ohio.
American Cyanamid Co., 30 Rockefeller Plaza, New York 20, N. Y.
American Elec. Fusion Corp., 2604 Diversey Blvd., Chicago 47, Ill.
American Emery Wheel Works, 325 Waterman St., Providence 1, R. I.
American Fork & Hoe Co., 1623 Euclid Ave., Cleveland 15, Ohio.
American Gas & Chemical Co., 111 S. 4th St., Harrison, N. J.
American Handle Co., P. O. Box 185, Jonesboro, Ark.
American Hoist & Derrick Co., 83 S. Robert St., St. Paul 1, Minn.
American Industrial Safety Equip. Co., 399 Bridge St., Brooklyn 1, N. Y.
American LaFrance-Foamite Corp., 100 E. La France St., Elmira, N. Y.
American Mach. & Metals Inc., Tolhurst Centrifugal Div., East Moline, Ill.
American Magnesium Corp., 2210 Harvard St., Cleveland 5, Ohio.
American Manganese Steel Div., American Brake Shoe Co., 389 E. 14th St., Chicago Heights, Ill.
American Metal Hose Branch, American Brass Co., 698 S. Main St., Waterbury 88, Conn.
American Nickeloid Co., 1501 2nd St., Peru 7, Ill.
American Optical Co., 14 Mechanic St., Southbridge, Mass.
American Oxygen Service Corp., Harrison, N. J.
American Photo Copy Equip. Co., 2849 N. Clark St., Chicago 14, Ill.
American Pipe Tool Co., 4856 W. Kinzie St., Chicago 44, Ill.
American Platinum Works, 231 N. J. R. R. Ave., Newark 5, N. J.
American Product Corp., 422 South Dearborn St., Chicago 5, Ill.
American Relay-Welder Co., 58 Frelinghuysen Ave., Newark 5, N. J.
American Rolling Mill Co., Rustless Iron & Steel Div., 3400 E. Chase St., Baltimore 13, Md.
American Sand Banum Co., Inc., 9 Rockefeller Plaza, New York 20, N. Y.
American Scale Co., 919 Baltimore Ave., Kansas City 6, Mo.
American Schaeffer & Budenberg Instr. Div., Manning Maxwell & Moore Inc., Bridgeport, Conn.
American Solder & Flux Co., 2152 E. Norris St., Philadelphia 25, Pa.
American Stamping Co., 310 E. Burnham St., Battle Creek, Mich.
American Steel & Wire Co., Rockefeller Bldg., Cleveland 13, Ohio.
American Swiss File & Tool Co., 410 Trumbull St., Elizabeth 1, N. J.
American Transformer Co., 178 Emmet St., Newark, N. J.
American Vacuum Co., 816 S. Michigan Ave., Chicago 5, Ill.
American Ventilating Hose Co., 15 Park Row, New York, N. Y.
American Wheelabrator & Eqpt. Corp. 448 S. Byrkit St., Mishawaka, Ind.
Ames, B. C. Co., 26 Ames St., Waltham 54, Mass.
Ames Spot Welder Co., Inc., 1328 58th St, Brooklyn 19, N. Y.
Ampco Metal, Inc., 1745 S. 38th St., Milwaukee 4, Wisc.
Ampco Twist Drill Co., 811 Belden St., Jackson, Mich.
Anaconda Wire & Cable Co., 25 Broadway, New York 4, N. Y.
Anderson Corp., 54 Commercial St., Worcester, Mass.
Anderson, Albert & J. M., Mfg. Co., 289-305 A St., S. Boston 10, Mass.
Angle Steel Stool Co., 500 Power St., Plainwell, Mich.
Anker Holth Mfg. Co., 2723 Conners St., Port Huron, Mich.
Ansul Chemical Co., 1 Stanton St., Marinette, Wisc.
Anti-Borax Compound Co., Inc., 1506 Wall St., Ft. Wayne 6, Ind.
Anzick Mfg. Co., 207-87 Mound Rd., Van Dyke, Mich.
Apollo Steel Co., Oliver Bldg., Pittsburgh, Pa.
Appleton Electric Co., 1701-1759 Wellington St., Chicago 13, Ill.
Arc Welding Supply Co., 814 Southern Blvd., Bronx 59, N. Y.
Arcos Corp., 50th & Paschall Ave., Philadelphia 43, Pa.
Aristo Power Tools, Inc., 601 W. Washington Blvd., Chicago 6, Ill.
Armco Steel Corp., 703 Curtis St., Middletown, Ohio.
Armglo Co., 3618 W. Pierce St., Milwaukee 4, Wisc.
Armite Laboratories 1900 E. 65th St., Los Angeles 1, Calif.
Armour & Co., Coated Abrasives Div., 1355 W. 31st St., Chicago 9, Ill.
Armstrong-Blum Mfg. Co., 5700 W. Bloomingdale Ave., Chicago, Ill.
Armstrong Bros. Tool Co., 5200 W. Armstrong Ave., Chicago 30, Ill.
Armstrong Cork Co., Lancaster, Pa.
Aro Equipment Corp., Enterprise & Trevitt Sts., Bryan, Ohio.
Aronson Machine Co., P. O. Box 317, Arcade, N. Y.
Arrow Hart & Hegeman Electric Co., 103 Hawthorne St., Hartford, Conn.
Arrowhead Rubber Co., 2244 E. 37th St., Los Angeles 1, Calif.
Ashton's Drug Stores 2724 Mahoning Ave. Youngstown 9, Ohio.
Associated Bag & Apron Co., 218 W. Ontario St. Chicago 10, Ill.
Athol Machine & Foundry Co., 82 Southington St., Athol, Mass.
Atkins, E. C. & Co., 402 S. Illinois St., Indianapolis 9, Ind.
Atlantic Abrasive Corp., 543 Pearl St., S. Braintree, Mass.
Atlantic Metal Hose Co., Inc., 123 W. 64th St. New York 23, N. Y.
Atlas Abrasive Corp., 459 12th St., Brooklyn, N. Y.
Atlas Foundry Co., 545 Lyons Ave., Irvington 11, N. J.
Atlas Press Co., 1710 N. Pitcher St., Kalamazoo 13D, Mich.
Atlas Welding Accessories Co., 707 East Lewiston St., Ferndale 20, Mich.
Atrax Co., The, 240 Day St., Newington 11, Conn.
Audell, Theo. & Co., 49 W. 23rd St., New York 10, N. Y.
Aufhauser Bros. Corp., 52 Wall St., New York 5, N. Y.

Aurora Equipment Co., Equipment Div., Aurora, Ill.
Auto Arc Weld Mfg. Co., 8007 Grand Ave., Cleveland 4, Ohio.
Automatic Gas Flux Co., Public Square Bldg., Cleveland 13, Ohio.
Automatic Temperature Control Co., Inc., 5212 Pulaski Ave., Phila. 44, Pa.

B

B & H Welder's Supplies, 403 Fourth St., Portsmouth, Va.
Babcock & Wilcox Tube Co., Alliance, Ohio.
Bache, Semon & Co., Greenwich & Morton Sts., New York 14, N. Y.
Baier & Ackerman, Inc., 18 E. 41st St., New York 17, N. Y.
Balbach Co., The, 1201-7 California St., Omaha 2, Neb.
Baldor Electric Co., 4352-64 Duncan Ave., St. Louis 10, Mo.
Baldwin Locomotive Works, The, Phila., Pa.
Banner Products Co., 4934 N. 29th St., Milwaukee 9, Wisc.
Bar-Ray Prods., Inc., 209 25th St., Brooklyn 32, N. Y.
Barnes, W. O., Co., Inc., 1297 Terminal Ave., Detroit 14, Mich.
Barth Mfg., Co., The, Milldale, Conn.
Bartlett Mfg. Co., 3003 E. Grand Blvd., Detroit 2, Mich.
Bastian-Blessing Co., 4201 W Peterson Ave., Chicago 30, Ill.
Bausch & Lomb Optical Co., 754 St. Paul St., Rochester 2, N. Y.
Bay State Abrasive Products Co., Union St., Westboro, Mass.
Bay State Tap & Die Co., 75 Chauncey St., Mansfield, Mass.
Bearium Metals Corp., 258 State St., Rochester 4, N. Y.
Beaver Pipe Tools, Inc., 310 Dana N.E., Warren, Ohio.
Beaverdell Co., 4465 Lincoln Ave., Chicago 25, Ill.
Becker Bros. Carbon Co., 3450 S. 52nd Ave., Cicero 50, Ill.
Behr-Manning Corp., Box 808, Troy, N. Y.
Belden Mfg. Co., 4647 W. Van Buren St., Chicago 44, Ill.
Bell Aircraft Corp., 195 Locust St., Lockport, N. Y.
Bellevue Industrial Furnace Co., Detroit, Mich.
Belmont Smelting & Refining Wks. Inc., 330 Belmont Ave., Brooklyn 7, N. Y.
Bendtin, Erwin, 77 Summer St., Boston 10, Mass.
Benjamin Elec. Mfg. Co., Northwest Highway & Seegers Rd., Des Plaines, Ill.
Bentley Weldery Inc., 410 Teall Ave., P. O. Box 1038, Syracuse 1, N. Y.
Berger Mfg. Div., Republic Steel Corp., 1038 Belden Ave. N. E., Canton 5, Ohio.
Bergstrom Alloys Corp., Reno, Nev.
Bernard Welding Equip. Co., 741 E. 71st St., Chicago 19, Ill.
Bernz, Otto, Co., Inc., 280 Lyell Ave., Rochester, N. Y.
Bethlehem Steel Co., 701 E. 3rd St., Bethlehem, Pa.
Bierman-Everett Foundry Co., 133 S. 20th St., Irvington 11, N. J.
Billings & Spencer Co., The, 1 Laurel St., Hartford 1, Conn.
Bingrod Co., 633 Jackson St., Kalamazoo 7, Mich.
Binks Mfg. Co., 3114-40 Carroll Ave., Chicago 12, Ill.
Bird Gas Corp., 12820 Evergreen Rd., Detroit 23, Mich.
Birdsell Mfg. Co., 500 San Antonio Rd., P. O. Box 733, Los Altos, Calif.
Bissett Steel Co., Cleveland, Ohio.
Black & Decker Mfg. Co., The, 600 E. Penna. Ave., Towson 4, Md.
Black Bros. Co., Inc., The, 501 Ninth Ave., Mendota, Ill.
Blackhawk Mfg. Co., 5325 W. Rogers St., Milwaukee 1, Wisc.
Black Mfg. Co., The, 1416-1428 W. Baltimore St., Baltimore 23, Md.
Blaw-Knox Co., Pittsburgh 30, Pa.
Blum, Julius, & Co., Inc., 532-540 W. 22nd St., New York 11, N. Y.
Bond, Charles, Co., 617-623 Arch St., Philadelphia 6, Pa.
Bond Foundry & Machine Co., Manheim, Pa.
Bonney Forge & Tool Works, Tilghman & Meadow Sts., Allentown, Pa.
Borg-Warner Corp., Ingersoll Steel Div., 310 S. Michigan Ave., Chicago 4, Ill.
Borm Mfg. Co., 23 N. Union St., Elgin, Ill.
Boss Mfg. Co., The, First & Chestnut Sts., Kewanee, Ill.
Boston Athletic Shoe Co., 25 Thorndike St., Cambridge 41, Mass.
Boston Woven Hose & Rubber Co., 29 Hampshire St., Cambridge, Mass.
Botfield Refractories Co., Swanson & Clymer St., Philadelphia 47, Pa.
Bowser, Inc., 1302 E. Creighton Ave., Ft. Wayne, Ind.
Boyer-Campbell Co., 6540 St. Antoine St., Detroit 2, Mich.
Bradford Machine Tool Co., 657 Evans St., Cincinnati 4, Ohio.
Brandt Cabinet Works, Inc., Hagerstown, Md.
Braun, J. G., Co., 609 S. Paulina St., Chicago 12, Ill.
Bridgeport Brass Co., 30 Grand St., Bridgeport 2, Conn.
Bridgeport Chain & Mfg. Co., The, 962 Crescent Ave., Bridgeport 1, Conn.
Bridgeport Safety Emery Wheel Co., Bridgeport, Conn.
Briggs Mfg. Co., Detroit 14, Mich.
Bristol Co., The, Waterbury 91, Conn.
Broderick & Bascom Rope Co., 4203 N. Union Blvd., St. Louis 15, Mo.
Brown & Sharpe Mfg. Co., 235 Promenade St., Providence 1, R. I.
Brown, W. R. Corp., 5720 W. Armitage Ave., Chicago 39, Ill.
Bruce Publishing Co., 540 N. Milwaukee St., Milwaukee 1, Wisc.
Bruner Ivory Handle Co., Hope, Ark.
Brunner Mfg. Co., 1821 Broad St., Utica 1, N. Y.
Bryant Heater Co., Industrial Div., Cleveland, Ohio.
Bryant Products Distributing Co., 297 W. Michigan Ave., DeLuxe Bldg., Jackson, Mich.
Buckeye Oxygen Co., 801 First Natl. Bldg., Canton 2, Ohio.
Buckeye Tool Corp., 29 W. Apple St., Dayton 2, Ohio.
Buda Co., 154th & Commercial Ave., Harvey, Ill.
Buegeleisen, Harry, 181 Pacific St., Brooklyn 2, N. Y.
Buehler, Ltd., 165 W. Wacker Dr., Chicago 1, Ill.
Buffalo Bolt Co., 101 East Ave., No. Tonawanda, N. Y.
Buffalo Fire Appliance Corp., Dayton, Ohio.
Buffalo Forge Co., 490 Broadway, Buffalo 5, N. Y.
Bullard, E. D., Co., 275 8th St., San Francisco, Calif.
Bullock, L. H., Co., #2 8th St., Richmond, Calif.
Bundy Tubing Co., 8109 E. Jefferson Ave., Detroit 14, Mich.
Bunting Brass & Bronze Co., 715-55 Spencer St., Toledo 9, Ohio.
Burdett Oxygen Co., 3300 Lakeside Ave., Cleveland 14, Ohio.
Burgess Parr Co., Freeport, Ill.
Burndy Engrg. Co., 107 Bruckner Blvd., New York 54, N. Y.
Butterfield Div., Union Twist Drill Co., Derby Line, Vt.
Byers, A. M., Co., Clark Bldg., Pittsburgh, Pa.

C

C. B. Tool Co., Box 94, Lancaster, Pa.
C-O Two Fire Equip. Co., 10 Empire St., Newark 5, N. J.
Cabot, Samuel, Inc., 151 Milk St., Boston 9, Mass.
Calder Mfg. Co., 628 N. Prince St., Lancaster, Pa.
Caldwell Co., The, 1830 Camp Ave., Rockford, Ill.
California Air Products, Huntington Park, Los Angeles, Calif.
Callite Tungsten Corp., 540-39th St., Union City, N. J.
Caltron Co., 1406 So. Holbart Blvd., Los Angeles 6, Calif.
Campbell, Andrew C., Div. of American Chain & Cable Co., Inc., Bridgeport, Conn.
Campbell, J. A., Co., 645 E. Wardlow Rd., Long Beach 7, Calif.
Canadian General Elec. Co., Ltd., Toronto, Ontario, Canada.
Canadian Radium & Uranium Corp., 630 5th Ave., New York 20, N. Y.
Candee's Machine Shop, 2641 S. Hill St., Los Angeles 7, Calif.
Candor Glove Co., McCarty St., Candor, N. Y.
Canedy Otto Mfg. Co., Main St. & E. End. Ave., Chicago Hts., Ill.
Capewell Mfg. Co., 60 Governor St., Hartford 2, Conn.
Capitol Steel Co., 15 E. 40th St., New York 16, N. Y.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y. 17, N. Y.
Carboloy Co., Inc., Roosevelt Park Annex Box 237, Detroit 32, Mich.
Carborundum Co., The, Box 337, Niagara Falls, N. Y.
Carbur Inc., Lincoln Park 25, Mich.
Card, S. W., Mfg. Co., Div. of Union Twist Drill Co., Rumford Ave., Mansfield, Mass.
Cardinal Machine Co., 109 S. Jackson St., Glendale 5, Calif.
Carey, Philip, Mfg. Co., Lockland, Cincinnati 15, Ohio.
Carhoff Co., 9321 Buckeye Rd., Cleveland 4, Ohio.
Carlin, Anthony, Co., The, 2717 E. 75th St., Cleveland 4, Ohio.
Carnegie-Illinois Steel Corp., Carnegie Bldg., Pittsburgh 30, Pa.
Carpenter Products Inc., 85 Washburn St., Bridgeport, Conn.
Carpenter Steel Co., Front & Bern Sts., Reading, Pa.
Carson-Newton Co., 61-71 Mill St., Belleville 9, N. J.
Carter-Lockhard Co., 1146 Wall St., Los Angeles 15, Calif.
Castaloy Corp., 197 S. Waterman, Detroit 17, Mich.
Castle, A. M. & Co., 1132 W. Blackhawk St., Chicago 22, Ill.
Central Sales Corp., 20 North Wacker Dr., Chicago 6, Ill.
Central Steel & Wire Co., 3000 W. 51st St., Chicago 32, Ill.
Cesco Products, Inc., 20 N. LaSalle St., Chicago 2, Ill.
Chain Belt Co., 1622 W. Bruce St., Milwaukee 4, Wisc.
Challenge Machinery Co., Grand Haven, Mich.
Champion Blower & Forge Co., Charlotte St. & Harrisburgh Pike, Lancaster, Pa.
Champion DeArment Tool Co., S. Main St., Meadville, Pa.
Champion Pneumatic Machinery Co., 8156 S. Chicago Ave., Chicago 17, Ill.
Champion Rivet Co., The, 10861 Harvard Ave., Cleveland 5, Ohio.
Chanite Sales Co., 914 S. Main St., Fort Worth 4, Tex.
Chase Brass & Copper Co., 236 Grand St., Waterbury 91, Conn.
Chek-Shock Mfg. Co., Flowler, Calif.
Chelsea Fan & Blower Co., Inc., 1206 Grove St., Irvington 11, N. J.
Chemical Publishing Co., Inc., 26 Court St., Brooklyn 2, N. Y.
Chester Hoist Div., The National Screw & Mfg. Co., Lisbon, Ohio.
Chicago Boiler Co., 1965 Clybourn Ave., Chicago 14, Ill.
Chicago Bridge & Iron Co., 37 W. Van Buren St., Chicago 5, Ill.
Chicago Eye Shield Co., 2300 Warren Blvd., Chicago 12, Ill.
Chicago Hardware Foundry Co., 2500 Commonwealth Ave., N. Chicago, Ill.
Chicago Latrobe Twist Drill Works, 411 W. Ontario St., Chicago 10, Ill.
Chicago Mfg. & Dist. Co., 1928 W. 46th St., Chicago 9, Ill.
Chicago Metal Hose Corp., 1315 S. Third Ave., Maywood, Ill.
Chicago Pneumatic Tool Co., 6 E. 44th St., New York 17, N. Y.
Chicago Rawhide Mfg. Co., 1286 Elston Ave., Chicago 22, Ill.
Chicago Steel & Wire Co., 10257 S. Torrence Ave., Chicago 17, Ill.
Chicago Tool and Engrg. Co., 8383 S. Chicago Ave., Chicago 17, Ill.
Chicago Welding Sales Co., 3349 W. Ogden Ave., Chicago 23, Ill.
Chicago Wheel & Mfg. Co., 1101 W. Monroe St., Chicago 7, Ill.
Chisholm Moore Hoist Corp., Fremont Ave., Tonawanda, N. Y.
Chrysler Corp., Third Natl. Bank Bldg., Dayton 2, Ohio.
Cinch Mfg. Corp., Howard B. Jones Div., 2460 W. George St., Chicago 18, Ill.
Cincinnati Elec. Tool Co., Madison & Edwards Rd., Cincinnati 8, Ohio.
Cincinnati Milling Machine Co., Marburg St., Cincinnati 9, Ohio.
Cincinnati Tool Co., 1944 Waverly Ave., Cincinnati 12, Ohio.
Cirod Distributing Co., 7950 W. 47th St., Lyons, Ill.
Clarage Fan Co., N. & Porter Sts., Kalamazoo, Mich.
Clark, Robert H. Co., 9330 Santa Monica Blvd., Beverly Hills, Calif.
Clark Controller Co., The, 1146 E. 152nd St., Cleveland 10, Ohio.
Clark, James, Jr., Electric Co., 645 Bergman St., Louisville 3, Ky.
Clark Equipment Co., Buchanan, Mich.
Clayton & Lambert Mfg. Co., 1701-1715 Dixie Highway, Louisville 10, Ky.
Cleco Div., Reed Roller Bit Co., P. O. Box 2119, Houston 1, Texas.
Clements Mfg. Co., 6656 S. Narragansett Ave., Chicago 38, Ill.
Clemson Bros. Inc., 22 Cottage St., Middletown, N. Y.
Cleveland Chain & Mfg. Co., Broadway & Henry St., Cleveland 5, Ohio.
Cleveland Crane & Engrg. Co., Wickliffe, Ohio.
Cleveland Electric Motor Co., 5213 Chester Ave., Cleveland 3, Ohio.
Cleveland Pneumatic Tool Co., The, 3781 E. 77th St., Cleveland, Ohio.
Cleveland Precision Ring & Products Co., 4501 Prospect Ave., Cleveland 3, Ohio.
Cleveland Tungsten, Inc., 10200 Meech Ave., Cleveland 5, Ohio.
Cleveland Twist Drill Co., The, 1242 E. 49th St., Cleveland 14, Ohio.
Clinch Mfg. Corp., 2460 W. George St., Chicago 18, Ill.
Clinton Machine Co., 79 Midland Ave., Detroit 3, Mich.
Clizbe Bros. Mfg. Co., Harrison & Place Sts., Plymouth, Ind.
Clover Mfg. Co., 327 Main St., Norwalk, Conn.
Coast Metals, Inc., 1232 Camden Ave., S.W., Canton 6, Ohio.
Coast Pneumatic Tool Co., 6516 Selma Ave., Los Angeles 28, Calif.
Cobb, R. L., 56 Euclid Ave., Willoughby, Ohio.
Coffing Hoist Co., 800 Walter St., Danville, Ill.
Cogsdill Twist Drill Co., Box 97, College Park Sta., Detroit 21, Mich.
Collmer Bros., 420 S. St. Joseph St., So. Bend 4, Ind.
Collyer Insulated Wire Co., Pawtucket, R. I.
Colonial Alloys Co., Ridge Ave. & Crawford Sts., Philadelphia 29, Pa.
Colonial Tanning Co., 622 W. Oregon St., Milwaukee 4, Wisc.
Colorado Fuel & Iron Corp., 2219 Market St., Denver 2, Colo.
Columbia Chemical Products Co., 3020 Middle Belt Rd., Pontiac, Mich.
Columbia Electric Mfg. Co., 4519 Hamilton Ave., Cleveland 14, Ohio.

Columbia Machinery & Engineering Corp., Hamilton, Ohio.
Columbia Steel Co., U. S. Steel Corp., Subsidiary, Russ Bldg., 235 Montgomery St., San Francisco 6, Calif.
Columbian Vise & Mfg. Co., 9021 Bessemer Ave., Cleveland 4, Ohio.
Columbus Anvil & Forging Co., 117 W. Frankfort St., Columbus 16, Ohio.
Columbus McKinnon Chain Corp., 120 Freemont St., Tonawanda, N. Y.
Combustion Control Corp., 77 Broadway, Cambridge 42, Mass.
Commerce Pattern Foundry & Mach. Co., 7450 Melville At Green, Detroit 17, Mich.
Commercial Gas Corp., 111 Scott St., Wilkes-Barre, Pa.
Conco Engrg. Works, 1940 Thomas St., Mendota, Ill.
Conical Tool Co., 443 Division South, Grand Rapids 3, Mich.
Connecticut Blower Co., 29-39 Alden St., Hartford 1, Conn.
Continental Gin Co., Industrial Div., Birmingham, Ala.
Continental Industrial Engineers' Co., 176 W. Adams St., Chicago 3, Ill.
Continental Steel & Supply Co., 833 Harrison St., San Francisco 7, Calif.
Cook's, Adam, Sons, Inc., 5 Stiles St., Linden, N. J.
Cooley Electric Mfg. Corp., Indianapolis, Ind.
Coppus Engineering Corp., 344 Park Ave., Worcester 2, Mass.
Cornell-Dubilier Electric Corp., South Plainfield, N. J.
Cornell Maritime Press, 241 W. 23rd St., N. Y. 11, N. Y.
Corning Glass Works, Corning, N. Y.
Corpus Christi Oxygen Co., 2827 Agnes St., Corpus Christi, Texas.
Cortland Grinding Wheels Corp., 15 Cortland St., Chester, Mass.
Cortland Sales & Products, Inc., Pearl St., Cortland, Ohio.
Cortland Welding Compound Co., 12-16 Crawford St., Cortland, N. Y.
Couse Laboratories, 300 Passaic St., Newark 4, N. J.
Cowles Detergent Co., 7016 Euclid Ave., Cleveland 3, Ohio.
Coyne Manufacturing Co., 200 Paul Avenue, San Francisco 24, Calif.
Craftsweld Equip. Corp., 2626 Jackson Ave., Long Island City 1, N. Y.
Cramer, R. W., Co., Inc., 1941 Plant St., Centerbrook, Conn.
Crane Co., 836 S. Michigan Ave., Chicago 5, Ill.
Cratex Mfg. Co., 81 Natoma St., San Francisco 5, Calif.
Crescent Insulated Wire & Cable Co., Trenton, N. J.
Crescent Tool Co., 200 Harrison St., Jamestown 4, N. Y.
Crouse Hinds Co., Wolf & 7th N. St., Syracuse, N. Y.
Crucible Steel Co. of America, 405 Lexington Ave., New York 17, N. Y.
Cullen-Friestedt Co., 1300 S. Kilborn Ave., Chicago 23, Ill.
Culver Glass Specialties, Inc., 28 St. Marks Place, New York 3, N. Y.
Cumming Tools Inc., 501-03 E. 18th St., Kansas City 8, Mo.
Cuneo Press Inc., 22nd Canal & Grove Sts., Chicago 16, Ill.
Curtis Pneumatic Machinery Div. of Curtis Mfg. Co., 1928 Kienlen Ave., St. Louis 20, Mo.
Cut-O-Guide Sales Co., 1900 Euclid Ave., Cleveland 15, Ohio.
Cutler Hammer, Inc., 315 N. 12th St., Milwaukee 1, Wisc.
Cutter Machine Co., 3723 Commonwealth Ave., St. Louis 17, Mo.

D

D-V Welding Controls, 3959 Piedmont Ave., Oakland 11, Calif.
Dahlstrom Mfg. Co., 420 S. 6th St., Minneapolis, Minn.
Dallett Co., The, Mascher at Lippincott St., Philadelphia 33, Pa.
Damascus Steel Prods. Corp., 2215 Kiskwaukee St., Rockford, Ill.
Daniels, C. R., Inc., 44 West St., N. Y. 6, N. Y.
Danly Machine Spec., Inc., 2100 S. 52nd St., Chicago 50, Ill.
Darling Valve & Mfg. Co., Ft. of Walnut St., Williamsport, Pa.
Darwin & Milner Inc., 1260 W. 4th St., Cleveland, Ohio.
Davies & Son, Inc., 1416 Westwood Blvd., Los Angeles 24, Calif.
Davis Emergency Equip. Co., Inc., 45 Halleck St., Newark, N. J.
Davis Regulator Co., 2544 S. Washentaw Ave., Chicago 8, Ill.
Dayton Grinding Wheel Co., 1101 Negley Pl., Dayton, Ohio.
Dayton Safety Ladder Co., 2337 Gilbert Ave., Cincinnati 6, Ohio.
DeBothezat Fans Div., Amer. Machine & Metals Inc., E. Moline, Ill.
Delta File Works, 4837 James St., Philadelphia 37, Pa.
Delta Mfg. Div. of Rockwell Mfg. Co., 620 E. Vienna Ave., Milwaukee, Wisc.
Dennis Chemical Co., Inc., 2701 Papin St., St. Louis 3, Mo.
Denver Oxygen Co., Inc., 1160 10th St., Denver 1, Colo.
DeSanno, A. P. & Son Inc., 436 Wheatland St., Phoenixville, Pa.
Desmond Stephan Mfg. Co., 317 S. Walnut St., Urbana, Ohio.
Despatch Oven Co., 619 Eighth St., S.E., Minneapolis 14, Minn.
Detroit Electrode Holders Mfg. Co., 3437 Book Bldg., Detroit Mich.
Detroit Electronic Products Co., 19929 Exeter Ave., Detroit 3, Mich.
Detroit First Aid Co., 6335 Grand River, Detroit, Mich.
Detroit Hoist & Machine Co., 8209 Morrow St., Detroit 11, Mich.
Detroit Stamping Co., 350 Midland St., Detroit 3, Mich.
Detroit Testing Machine Co., 9390 Grinnell Ave., Detroit 13, Mich.
Deutschman Corp., Canton, Mass.
DeVilbiss Co., 300 Phillips Ave., Toledo 1, Ohio.
Diamond Alkali Co., Oliver Bldg., Pittsburgh 22, Pa.
Diamond Mechanical Goods, Div. of The B. F. Goodrich Co., 444 S. Main St., Akron, Ohio.
Diamond Saw Works, Inc., 265 Court St., Buffalo 2, N. Y.
Diener, Geo. W., Mfg. Co., 400 Monticello Ave., Chicago 24, Ill.
Dill Mfg. Co., 700 E. 82nd St., Cleveland 3, Ohio.
Dillon, W. C. & Co., Inc., 5410 W. Harrison St., Chicago 44, Ill.
Disston, Henry & Sons, Inc., Milnot & Unrah St., Tacony, Phila., Pa.
Dixon, Joseph, Crucible Co., 167 Wayne St., Jersey City 2, N. J.
Dixon Valve & Coupling Co., Hancock St. & Columbia Ave., Philadelphia 22, Pa.
Diversey Corp., 53 W. Jackson Blvd., Chicago 4, Ill.
Divine Bros. Co., 200 Seward St., Utica 1, N. Y.
DoAll Co., 245 N. Laurel Ave., DesPlaines, Ill.
Dockson Corp., 3839 Wabash Ave., Detroit 8, Mich.
Dodge Mfg. Corp., 500 S. Union St., Mishawaka, Ind.
Dolph, John C., Co., 1060 Broad St, Newark 2, N. J.
Dominion Bridge Co., Ltd., 32nd Ave. & 17th St., E. Calgary, Alberta, Canada.
Donnelley, R. R., & Son 350 E. Cermak, Chicago 16, Ill.
Dow Chemical Co., 1014 Jefferson Ave., Midland, Michigan.
Dow Pneumatic Tool Co., 176 W. Adams St., Chicago 3, Ill.
Drake, Frederick J., & Co., 600 W. Van Buren St., Chicago 7, Ill.
Dremel Mfg. Co., 2420 18th St., Racine, Wisc.
Drennan, Lee J., Inc., 430 W. Main St., Arcade, N. Y.
Dresser Industries, Inc., Terminal Tower, Cleveland 13, Ohio.
Drever Co., 748 E. Venango St., Philadelphia, Pa.
Driver-Harris Co., Harrison, N. J.
Dudgeon, Richard, Inc., 24 Columbia St., New York 2, N. Y.
Duff Norton Mfg. Co., The, 2709 Preble Ave., Pittsburgh 30, Pa.
Dumore Co., 1225 Fourteenth St., Racine, Wisc.
Dunn Products, 1216 W. Madison St., Chicago, Ill.
du Pont de Nemours, E. I., & Co., Inc., Fabrics Div., Fairfield, Conn.
du Pont de Nemours, E. I. & Co., Inc., Grasselli Chemicals Dept., Wilmington 98, Del.
du Pont de Nemours, E. I., & Co., Inc., Wilmington 98, Del.
du Pont de Nemours, E. I., & Co., Inc., Pattern Screen Div., Towanda, Pa.
du Pont de Nemours, E. I., & Co., Inc., Photo Products Dept., Wilmington 98, Del.
Duquesne Electric & Mfg. Co., Pittsburgh 6, Pa.
Dur-a-Bilt Products, Sussex, Wisc.
Durbin Durco, 6611 Oliver St. Rd., St. Louis 5, Mo.
Duro Engineering Co., 136 Park St., New Haven, Conn.
Duro Metal Products Co., 2649 N. Kildare Ave., Chicago 39, Ill.
Dymonhard Corp., 250 W. 57th St., New York 19, N. Y.

E

Eagle Mfg. Co., 24th & Charles St., Wellsburg, W. Va.
Eagle Picher Co., The, American Bldg., Cincinnati 1, Ohio.
Eagle Welding Equipment Co., 5085 N. Broadway, Chicago, Ill.
Eastern Empire Co., 230 Bankers Investment Bldg., San Francisco, Calif.
Eastern Equipment Co., Inc., Willow Grove, Pa.
Eastern Stainless Steel Corp., Box 1975, Baltimore 3, Md.
Eastern Tool & Mfg. Co., 1 Montgomery St., Belleville 9, N. J.
Eastman Kodak Co., 343 State St., Rochester 4, N. Y.
Eaton Mfg. Co., Wilcox Rich Div., Detroit, Mich.
Eccles & Davies Machinery Co., Inc., 1910 Santa Fe Ave., Los Angeles 21, Calif.
Ecco High Frequency Corp., North Bergen, N. J.
Eclipse Fuel Engineering Co., 711 S. Main St., Rockford, Ill.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Eisler Engrg. Co., Inc., 738-758 South 13th St., Newark 3, N. J.
Eitel-McCullough, Inc., 1570 San Mateo Ave., San Bruno, Calif.
Electric Arc, Inc., 152-62 Jelliff Ave., Newark 8, N. J.
Elec. Auto Lite Co., Champlain-Mulberry Sts., Toledo 1, Ohio.
Electric Blower Co., 352 Atlantic Ave., Boston 10, Mass.
Electric Controller & Mfg. Co., 2700 E. 79th St., Cleveland 4, Ohio.
Electric Eye Equipment Co., Danville, Ill.
Electric Hose & Rubber Co., 12th & Dure Sts., Wilmington 99, Del.
Electric Machinery Mfg. Co., Minneapolis 13, Minn.
Electric Soldering Iron Co., Inc., W. Elm St., Deep River, Conn.
Electric Storage Battery Co., Philadelphia, Pa.
Electric Welding Machine Co., 9635 French Rd., Detroit, Mich.
Electro Cover Glass Co., Inc., Sharpsburg St. Pittsburgh, Pa.
Electro Refractories & Alloys Co., 344 Delaware Ave., Buffalo 2, N. Y.
Electroloy Co., The, 1600 Seaview Ave., Bridgeport 7, Conn.
Electronic Controls Inc., 44-66 Summer Ave., Newark 4, N. J.
Electronic Products Co., P. O. Box 74, N. Aurora, Ill.
Electrons, Inc., 127 Sussex Ave., Newark 4, N. J.
Elliott Mfg. Co., 350 State St., Binghamton, N. Y.
Ellwood Products Corp., Ellwood City, Pa.
Elmes, Chas. F., Co., 230 N. Morgan St., Chicago, Ill.
Emerson Elec. Mfg. Co., 8100 Florissant Ave., St. Louis 21, Mo.
Ergolyte Mfg. Co., 3626 N. Lawrence St., Philadelphia 40, Pa.
Essex Brass Corp., 2000 Franklin St., Detroit 7, Mich.
Eutectic Welding Alloys Corp., 40 Worth St., New York 13, N. Y.
Ever-Tite Alloy Corp., 1-3 Bleeker St., New York, N. Y.
Everlasting Valve Co., 49 Fisk St., Jersey City 5, N. J.
Expert Welding Machine Co., 17144 Mt. Elliott St., Detroit 12, Mich.

F

Fairbanks-Morse & Co., 610 S. Michigan Ave., Chicago 5, Ill.
Fairmont Tool & Forging Co., 10611 Quincy Ave., Cleveland, Ohio.
Falcon Equipment Co., 13th St., New Brighton, Pa.
Famco Machine Co., 1320 18th St., Racine, Wisc.
Fansteel Metallurgical Corp., N. Chicago, Ill.
Farrelloy Co., 1234 No. 26th St., Phila. 21, Pa.
Farris Engineering Co., 400 Commercial Ave., Palisades Park, N. J.
Faulk, F. R., Craft Bldg., 405 Penn. Ave., Pittsburgh 22, Pa.
Fauver, J. N., Co., 41 W. Hancock Ave., Detroit 1, Mich.
Federal Electric Co., Inc., 8700 S. State St., Chicago 19, Ill.
Federal Electric Prods. Co., 2nd Ave., L., Newark, N. J.
Federal Machine & Welder Co., The, 390 Griswold St., N.E., Warren, Ohio.
Federal Telephone & Radio Corp., 591 Broad St., Newark 2, N. J.
Fibre Abrasive Corp., 1129 E. 74th St., Chicago 19, Ill.
Fibre Metal Prod. Co., 5th & Tilghman St., Chester, Pa.
Firth Sterling Steel & Carbide Corp., 2201-3299 Demmler Rd., McKeesport, Pa.
Fish-Schurman Corp., 230 E. 45th St., N. Y. 17, N. Y.
Fisher & Norris (Eagle Anvil Wks), 37-45 Bloomsbury St., Trenton 1, N. J.
Flagg, Stanley G., & Co., Inc., 1421 Chestnut St., Philadelphia 2, Pa.
Flint Products Co., 2923 Ave. H., Brooklyn 10, N. Y.
Flood Safety Prod. Co., 3035 West Lake St., Chicago 12, Ill.
Flux-All Chemical Products, 4018 10th Ave., New York 34, N. Y.
Foley Mfg. Co., 30 N. E. 2nd St., Minneapolis 13, Minn.
Foote Mineral Co., 522 Germantown Trust Co. Bldg., 10 E. Chelton Ave., Philadelphia 44, Pa.
Ford, Bacon & Davis, Inc., 39 Broadway, N. Y. 6, N. Y.
Ford, J. B., Wyandotte, Mich.
Ford, M. A., Mfg. Co., Inc., 732 W. First St., Davenport, Iowa.
Ford Chain Block Div. of American Chain & Cable Co., Inc., York, Pa.
Foredom Electric Co., 27 Park Place, New York 7, N. Y.
Forney Mfg. Co., 1800 La Porte, Box 563, Ft. Collins, Colo.
Fox Grinders Inc., Oliver Bldg., Pittsburgh, Pa.
Franklin Transformer Mfg. Co., 65 22nd Ave., N.E., Minneapolis 18, Minn.
Friez Instrument Div. of Bendix Aviation Corp., Taylor Ave. & Lock Haven Blvd., Baltimore 4, Md.
Frostrode Products, 19929 Exeter, Detroit 3, Mich.
Fruehauf Trailer Co., 10940 Harper Ave., Detroit 32, Mich.
Fuller, G. C., Mfg. Co., Cincinnati, Ohio.
Fusion Engineering 4504 Superior Ave., Cleveland 3, Ohio

G

Gallup Ruffing Handle Co., St. Marys St., Norwalk, Ohio
Galv-Weld Products, 324 East Second St., Dayton, Ohio
Gardner Denver Co., Quincy, Ill.
Garibay Mfg. Co., 1517 Colegrove Ave., Montebello, Calif.
Garlinghouse Brothers, 2416 E. 16th St., Los Angeles, Calif.
Garrett, George K., Co., Inc., Tioga & D Sts., Philadelphia 34, Pa.
Gas Appliance Service, Inc., 1211 Webster Ave., Chicago 14, Ill.
Gasflux Co., The, 198 Wayne St., Mansfield, Ohio
Gaso Equipment Co., 3253 N. Kedzie Ave., Chicago 18, Ill.
Gaston Power Tools, 2657 West 95th St., Chicago 42, Ill.
Gasweld Equipt. Co., 625 W. Jackson St., Chicago 6, Ill.
Gates Rubber Co., 999 S. Broadway, Denver 17, Colorado
Gellid Engineering, 20½ Lake St., Oak Park, Ill.
Gem Mfg Co., 1229-1243 Goebel St., Pittsburgh 12, Pa.
General Aniline & Film Co., Ansco Div., Binghamton, N. Y.
General Blower Co., 8600 Ferris St., Morton Grove, Ill.
General Cable Corp., 420 Lexington Ave., New York 17, N. Y.
General Detroit Corp., 2272 E. Jefferson Ave., Detroit 7, Mich.
General Electric Co., Apparatus Dept. 1 River Rd., Schenectady 5, N. Y.
General Elec. Co., Nela Park, Cleveland 12, Ohio.
General Elec. X-Ray Corp., 4855 W. McGeoch Ave., Milwaukee 14, Wisc.
General Pacific Corp., 1800 S. Hooper Ave., Los Angeles 21, Calif.
General Refractories Co., 1600 Real Estate Bldg., Philadelphia 7, Pa.
General Scientific Equip. Co., 27th & Huntingdon Sts., Philadelphia 32, Pa.
General Welding Co., 7404 Euclid Ave., Cleveland 3, Ohio.
General Welding & Equip. Co., 268 Northampton St., Boston 18, Mass.
Girdler Corp., The, 224 E. Broadway, Louisville 2, Ky.
Gleason Corp., 3043 N. 30th St., Milwaukee 10, Wisc.
Glenn-Roberts Co., 2107 Adams St., Indianapolis 1, Ind.
Globe Steel Tubes Co., 3839 West Burnham St., Milwaukee 12, Wisc.
Golden Rod Equip. Co., 617 Montgomery St., San Francisco 11, Calif.
Goldsmith Bros. Smelting & Refining Co., 58 East Washington St., Chicago 3, Ill.
Goodall Rubber Co., 5 S. 36th St., Philadelphia, Pa.
Goodell Pratt Co., Div. of Millers Falls Co., 57 Wells St., Greenfield, Mass.
Goodheart Wilcox Co., Inc. 2009 S. Michigan Ave., Chicago 16, Ill.
Goodrich, B. F., Co., 500 S. Main St., Akron 11, Ohio.
Goodyear Tire & Rubber Co., 1144 E. Market St., Akron 16, Ohio.
Gordon, Claud S., Co., 3000 S. Wallace St., Chicago 16, Ill.
Gorham Tool Co., 1440 Woodrow Wilson St., Detroit, Mich.
Gouran, Mark F., 7426 Devon Ave., Phila., Pa.
Graham Rotary File & Tool Co., 4816 Tacony St., Philadelphia 37, Pa.
Grand Specialties Co., 3135 West Grand Ave., Chicago 22, Ill.
Granite City Steel Co., 20th & Madison Ave., Granite City, Ill.
Graton & Knight Co., 356 Franklin St., Worcester 4, Mass.
Gray Co., Inc.., 60 11th Ave., N. E., Minneapolis 13, Minn.
Gray Mills Corp., 1948 Ridge Ave., Evanston, Ill.
Great Lakes Steel Corp., Alloy Div., Ecorse, Detroit 18, Mich.
Great Lakes Steel Corp., Tecumseh Rd., Ecorse, Detroit 18, Mich.
Greene Tweed & Co., North Wales, Pa.
Greenfield Tap & Die Corp., Sanderson St., Greenfield, Mass.
Greenlee Tool Co., Div. of Greenlee Bros. & Co., 2136 Twelfth St., Rockford, Ill.
Greyhound A. C. Arc Welder Corp., 604 Johnson Ave., Brooklyn 6, N. Y.
Griffin, G. W., Co., 93 Memorial St., Franklin, N. H.
Grinnell Co., 260 W. Exchange St., Providence 1, R. I.
Griscom-Russell Co., 285 Madison Ave., New York, N. Y.
Grobet File Co. of America, 421 Canal St., New York 13, N. Y.
Gumm, Frederick, Chemical Co., Kearney, N. J.
Guyan Machinery Co., Box 150, Logan, W. Va.

H

H & M Pipe Beveling Machine Co., 611 Petroleum Bldg., Tulsa, Okla.
Hamilton Alexander Inst., 71 W. 23rd St., New York 10, N.Y.
Hamilton Tool Co., 9th & Hanover Sts., Hamilton, Ohio
Hammett Elec. Mfg. Co., 706-708 E. 18th St., Kansas City 8, Mo.
Hammond Associates Inc., The, Suite 3022, Empire State Bldg., N. Y. 1, N. Y.
Hammond Machinery Builders Inc., 1600 Douglas Ave., Kalamazoo, Mich.
Hampton Electric Mfg. Co., 1238 Voskamp St., Pittsburgh 12, Pa.
Hancock Valve Div., Manning Maxwell & Moore Inc., Bridgeport, Conn.
Handy & Harman, 82 Fulton St., New York 7, N. Y.
Hannifin Mfg. Co., 621 S. Kolmar Ave., Chicago, Ill.
Hanover Glove Co., 2-6 Exchange Pl., Hanover, Pa.
Hansen, S. A., Co., 58 Frelinghuysen Ave., Newark 5, N. J.
Hanson-Van Winkle-Munning Co., Matawan, N. J.
Har-Worth Mfg. Co., Rt. 4, Box 90, Sherwood, Oregon
Harbison Walker Refractories Co., 1800 Farmers Bank Bldg., Pittsburgh, Pa.
Harmo Tire & Rubber Corp., 518 Hammond Bldg., Detroit 26, Mich.
Harmon & Co., 6 N. Michigan Ave., Chicago 2, Ill.
Harnischfeger Corp., 4400 W. National Ave., Milwaukee 14, Wisc.
Harrington Co., 17th & Callowhill Sts., Philadelphia 30, Pa.
Harris Calorific Co., 5501 Cass Ave., Cleveland 2, Ohio
Harrisburg Steel Corp., Simpson & Wear Sts., Harrisburg, Pa.
Haskins, R. G. Co., 2651 West Harrison St., Chicago 12, Ill.
Hauck Mfg. Co., 124-136 10th St., Brooklyn 15, N. Y.
Hawaiian Gas Products Ltd., P. O. Box 2454, 458 Kuwili St., Honolulu, Hawaii
Hayes, C. I., Inc., 75 Baker St., Providence 5, R. I.
Hayes Track Appliance Co., Richmond, Ind.
Haynes Stellite Co., 30 E. 42nd St., New York 17, N. Y.
Hazard Insulated Wire Works Div. of the Okonite Co., 72 Hagle St., Wilkes Barre, Pa.
Hazard Wire Rope Div. of American Chain & Cable Co., Inc., Wilkes Barre, Pa.
Heath Engineering Co., 209 Jefferson St., Ft. Collins, Colo.
Hebard, W. F. & Co., 336 W. 37th St., Chicago 9, Ill.
Hedstrom Industries Inc., 4856 W. Division St., Chicago 51, Ill.
Heller Brothers Co., 865 Mt. Prospect Ave., Newark 4, N. J.
Henley, Norman W., Publishing Co., 2 W. 45th St., New York 19, N. Y.
Hercules Chemical Co., Inc., 332 Canal St., New York 13, N. Y.
Hercules Elec. & Mfg. Co., Inc., 2500 Atlantic Ave., Brooklyn 7, N. Y.
Heston & Anderson, 608 W. Kirkwood St., Fairfield, Iowa
Hevi Duty Elec. Co., 4212 W. Highland Blvd., Milwaukee 1, Wisc.
Hewitt Rubber Corp., Hewitt Rubber Div., 240 Kensington Ave., Buffalo 5, N. Y.
Hewlett Packard Co., 367 Addison Ave., Palo Alto, Calif.
Hexacon Electric Co., 161 W. Clay Ave., Roselle Park, N. J.
Hi-Lo Mfg. Co., 537 Orleans St., Detroit 7, Mich.
Higgins Industries, Inc., Industrial Canal Plant, New Orleans 19, La.
Hisey-Wolf Machine Co., 2889 Spring Grove Ave., Cincinnati 25, Ohio
Hobart Brothers Co., Hobart Sq., Troy, Ohio
Hoffman, Robert W., Co., Inc., 10 S. Clinton St., Chicago 6, Ill.
Hoke Inc., 136-150 S. Dean St., Englewood, N. J.
Holcomb Safety Garment Co., 128 N. Jefferson St., Chicago 2, Ill.
Holcroft & Co., 6545 Epworth Blvd., Detroit 10, Mich.
Holden, A. F., Co., 52 Richards St., P. O. Box 1898, West Haven 16, Conn.
Hollands Mfg. Co., 342-352 E. 18th St., Erie, Pa.
Hollingshead, R. M., Corp., 840 Cooper St., Camden, N. J.
Hollup Corp., 4700 W. 19th St., Chicago 50, Ill.
Holth Mfg. Co., Port Huron, Mich.
Home Rubber Co., Trenton 5, N. J.
Hones, Charles A., Inc., 121 S. Grand Ave., Baldwin, L. I., N. Y.
Hooper, Wm. E., & Sons Co., Juniper & Cherry, Philadelphia, Pa.
Hope Natural Gas Co., 445 W. Main St., Clarksburg, W. Va.
Hopkins Engineering Co., 110 W. Broadway, Glendale, Calif.
Hose Accessories Co., 2776 N. 17th St., Philadelphia 32, Pa.
Hoskins Mfg. Co., 4445 Lawton Ave., Detroit 8, Mich.
Houghton & Co., 303 W. Lehigh Ave., Phila. 33, Pa.
Houston Oxygen Co., 5611 Clinton Drive, Houston 1, Texas
Hunt, C. B., & Son, Inc., 1913 E. Pershing St., Salem, Ohio
Hunt, Robert W., Co., 59 Murray St., N. Y. 7, N. Y.
Hurbenium Co., Napoleon, Ohio
Hydraulic Press Mfg Co., Marion Rd., Mt. Gilead, Ohio

I

I. S. C. Flame Cutter Corp., 269 Walker St., Detroit 7, Mich.
Ideal Electric & Mfg. Co., Mansfield, Ohio
Ideal Industries Inc., 1935 Park Ave., Sycamore, Ill.
Ilg. Electric Ventilating Co., 2850 N. Crawford Ave., Chicago 41, Ill.
Illinois Tool Works, 2501 North Keeler Ave., Chicago 39, Ill.
Imperial Brass Mfg. Co., The, 1200 W. Harrison St., Chicago 7, Ill.
Independent Engrg. Co., Inc., O'Fallon, Ill.
Independent Pneumatic Tool Co., 600 W. Jackson Blvd., Chicago, Ill.
Indiana Oxygen Co., 435 S. Delaware St., Indianapolis 6, Ind.
Indianapolis Brush & Broom Mfg. Co., Corner Brush & Broom St., Indianapolis 7, Ind.
Induction Heating Corp., 181 Wythe Ave., Brooklyn 11, N. Y.
Industrial Corp., Baltimore Life Bldg., Baltimore 1, Md.
Industrial Engr., 4268 Shenandoah Ave., St. Louis 10, Mo.
Industrial Equip. Co., 315 N. Ada St., Chicago 7, Ill.
Industrial Gloves Co., 700 Garfield Bldg., Danville, Ill.
Industrial Overlay Metals Inc., 410 N. Barron St., Eaton, Ohio
Industrial Oxygen Co., 1377 S. 7th St., Louisville 8, Ky.
Industrial Press, The, 148 Lafayette St., N. Y. 13, N. Y.
Industrial Products Co., 2820 N. Fourth St., Philadelphia 33, Pa.
Industrial Timer Corp., 117 Edison Place, Newark, N. J.
Ingersoll-Rand Co., 11 Broadway, N. Y. 4, N. Y.
Ingersoll Steel Div., Borg-Warner Corp., 310 S. Michigan Ave., Chicago 4, Ill.
Inland Steel Co., 38 South Dearborn St., Chicago 3, Ill.
Innis, Speiden & Co., 117 Liberty St., N. Y., N. Y.
Insto Gas Corp., 1900 E Jefferson St., Detroit 7, Mich.
International Chain & Mfg Co., York, Pa.
International Nickel Co., Inc., 67 Wall St., N. Y. 5, N. Y.
International Salt Co, Inc., Scranton Life Bldg., Scranton 3, Pa.
International Shoe Co., 1509 Washington St., St. Louis 3, Mo.
International Text Book Co., 1001 Wyoming Ave., Scranton, Pa.
Interstate Machinery Co., 1431 W. Pershing Rd., Chicago 9, Ill.
Interstate Sales Co., 1123 Broadway, N. Y. 10, N. Y.
Invincible Vacuum Cleaner Mfg. Co., Dover, Ohio

J

Jackson Products, 31730 Mound Rd., Warren, Mich.
Janos Asbestos Co., 39 Cortlandt St., New York 7, N. Y.
Jarvis, Charles L., Co., Stack St., & Pease Ave., Middletown, Conn.
Jefferson Engineering & Mfg. Co., 269 Walker St., Detroit 7, Mich.
Jeffrey Mfg. Co., 800 N. 4th St., Columbus 16, Ohio
Jenkins Bros., 80 White St., New York, N. Y.
Jergens Tool Specialty Co., 712 E. 163rd St., Cleveland 10, Mich
Jessop Steel Co., 500 Green St., Washington, Pa.
Jewel Mfg. Co., 1841 University Ave., St. Paul 4, Minn
Johns-Manville Corp., 22 E. 40th St., New York 16, N. Y.
Johnson Bronze Co., 535 S. Mill St., New Castle, Pa.
Johnson Gas Appliance Co., 520 E. Ave., N. W., Cedar Rapids, Iowa
Johnson Mfg Co., Inc., Mt. Vernon, Iowa
Johnson Mfg. Corp., 405 Lexington Ave., New York 17, N. Y.
Johnson Steel & Wire Co., Inc., 55 Wiser Ave., Worcester 7, Mass.
Johnston, A. P., 1845 E. 57th St., Los Angeles 11, Calif.
Jones Engineering Co., 523 Spring St., Ellwood City, Pa.
Jones, Howard B. Div., Cinch Mfg. Co., 2460 W. George St., Chicago 18, Ill.
Jones, C. Walker, Co., 6135 N. Lambert St., E. Germantown, Phila., Pa.
Jones & Laughlin Steel Corp., 311 Ross St., Pittsgurgh 30, Pa.
Joslyn Mfg. & Supply Co., 20 N. Wacker Dr., Chicago 6, Ill.
Joyce Cridland Co., The, 2027 E. First St., Dayton, Ohio
Justrite Mfg. Co., 2061 N. Southport Ave., Chicago 14, Ill.

K

K-G Welding & Cutting Co., Inc., 515 W. 29th St., New York 1, N. Y.
Kacena Co., The, 614 Second Ave., S. E., Cedar Rapids, Iowa
Kalamazoo Tank Silo Co., Machine Tool Div., 508 Harrison St., Kalamazoo 16, Mich.
Kansas Oxygen Co., P. O. Box 551, 126½ N. Main St., Hutchinson, Kan.
Keasbey & Mattison Co., Ambler, Pa.
Keaton Mfg. Co., Butler, Wisc.
Kedman Co., 233 S. 5th W. St., Salt Lake City 1, Utah.
Kelite Products Inc., 909 E. 60th St., Los Angeles, Calif.
Keller Tool Co., 1333 Fulton St., Grand Haven, Mich.
Kelley Koett Mfg. Co., 212 W. Fourth St., Covington, Ky
Kellogg Div of the Amer. Brake Shoe Co., 97 Humboldt St., Rochester 9, N. Y.
Kelly, Geo. J., Inc., 56 Sanderson Ave., Lynn, Mass.

Kempsmith Machine Co., 1829 S. 71st St., Chicago, Ill.
Ken-Rad Tube & Lamp Corp., Owensboro, Ky.
Kerk-Aloy Co., Bloomington, Ind.
Kerkling, C. A., Metals Co., 1765 N. San Fernando Rd., Burbank, Calif.
Kern, John A., Co., 224 N. Loomis St., Chicago 7, Ill.
Kerotest Mfg. Co., 2525 Liberty Ave., Pittsburgh, Pa.
Kester Solder Co., 4201 Wrightwood Ave., Chicago 39, Ill.
Kett Tool Co., 5 East 3rd St., Cincinnati 2, Ohio
Keuffel & Esser Co., Adams & 3rd Sts., Hoboken, N. J.
Key Co., Box 494, E. St. Louis, Ill.
Keystone Carbon Co., Inc., 1935 State St., St. Marys, Pa.
Keystone Lubricating Co., 21st Clearfield & Lippincott Sts., Philadelphia, Pa.
Kidde, Walter & Co., Inc., 675 Main St., Belleville 9, N. J.
Kieley & Mueller Inc., 2013-2033 43rd St., No. Bergen, N. J.
Kimball Safety Prod. Co., 7314 Wade Park Ave., Cleveland 3, Ohio
Kirk, Morris P., & Son Inc., Los Angeles 23, Calif.
Klein, Mathias, & Sons, 3200 Belmont Ave., Chicago 18, Ill.
Klem Chemicals Inc., 14401 Lamson, Dearborn, Mich.
Klenk, Karl, 107 E. 5th St., Wilmington 1, Del.
Kling Bros. Engrg. Works, 1300 N. Kostner Ave., Chicago 51, Ill.
Knox Mfg. Co., 819 Cherry St., Philadelphia 7, Pa.
Knu Vise, Inc., 2200 Eighth St., Detroit 16, Mich.
Koch Welding Works, 2843 Whittier Blvd., Los Angeles, Calif.
Koppers Co., Inc., Tar Products Div., Wailes Dov. Hermiston Dept., 449 S. Ave., Westfield, N. J.
Korn Leather Co., Peabody, Mass.
Krueger & Co, Inc., 585 Eighteenth Ave., Newark 3, N. J.
Krembs & Co., 669 W. Ohio St., Chicago 10, Ill.
Krieg, Charles W., Co., 52-60 Dickerson St., Newark 6, N. J.
Kriewaldt Specialty Mfg. Co., Oconto, Wisc.
Kropp Forge Co., 5301 W. Roosevelt Rd., Chicago 50, Ill.
Kunkle Valve Co., 119 21 Clinton St., Ft. Wayne, Ind.
Kwikheat Mfg. Co., 3732 San Fernando Rd., Glendale 4, Calif.

L

Laacke, R., Co., 1635 N. Third St., Milwaukee, Wisc.
Laclede-Christy Co., Ambassador Bldg., St. Louis, Mo.
Ladish Co., 5481 S. Packard Ave., Cudahy, Wisc.
Lake Chemical Co., 607 N. Western Ave., Chicago 12, Ill
Lamson & Sessions Co., 3101 27th Ave., N. Birmingham, Ala.
Lapeer Mfg. Co., 3056 Davidson Rd., Lapeer, Mich.
Lapsco Enterprises, 3915 N. Georgia, Box 263, Oklahoma City 6, Okla.
Larkin Lectro Pdts. Corp., 160 W. 146th St., New York 30, N. Y.
Laughlin, Thomas Co., 143 Fore St., Portland 6, Maine
Le Jay Mfg. Co., 2900 Emerson Ave., S., Minneapolis 8, Minn.
Lee, K. O., Co., 1120 First Ave., S. E., Aberdeen, S. Dak
Lee Rubber & Tire Corp., Albert St., Youngstown 1, Ohio
Leetonia Tool Co., 142 Main St., Leetonia, Ohio
Lehigh Safety Shoe Co., Race & Court St., Allentown, Pa.
Lenape Hydraulic Pressing & Forging Co., Box 536, West Chester, Pa.
Lepel High Frequency Lab. Inc., 39 W. 60th St., New York 23, N. Y.
Leslie Co., Grand Ave., Lyndhurst, N. J.
LeTourneau, R. G., Inc., Peoria, Ill.
Lewis Machine Co., 3441 East 76th St., Cleveland 4, Ohio
Lewis-Shepard Sales Corp., 117 Walnut St., Watertown 72, Mass.
Lichtman & Sons, 241 Frelinghuysen Ave., Newark 5, N. J.
Lignum Vitae Products Corp., 96 Boyd St., Jersey City, N. J.
Lincoln Elec. Co., The, 12818 Coit Rd., Cleveland 1, Ohio.
Lincoln Engineering Co., 5701 Natural Bridge Ave., St. Louis 20, Mo.
Lincoln Park Industries Inc., 1719 Ferris, Detroit 25, Mich.
Lindberg Engrg. Co., 2450 W. Hubbard St., Chicago 12, Ill.
Linde Air Products Co., The, 30 E. 42nd St., New York 17, N. Y.
Link, O. P. Handle Co., Salem, Ind.
Link Welder Corp., 13840 Elmira St., Detroit, Mich.
Lintern Corp., The, 58 Lincoln Ave., Berea, Ohio
Liquid Carbonic Corp., The, 3110 S. Kedzie Ave., Chicago 23, Ill.
Lonergan, J. E., Co., 2nd & Race Sts., Philadelphia 6, Pa.
Lucas-Milhaupt Engineering Co., 5057 S. Lake Dr., Cudahy, Wisc.
Lufkin Rule Co., Hess St., Saginaw, Mich.
Lukens Steel Co., 308 S. First Ave., Coatesville, Pa.
Lunkenheimer Co., Waverly Ave. & Beekman St., Cincinnati 14, Ohio
Lutz File & Tool Co., 1905 Lexington Ave., Cincinnati 12, Ohio
Lyon Metal Products, Inc., Aurora, Ill.
Lyon-Raymond Corp., 179 Madison St., Greene, N.Y.

Mc

McAn, Thom Safety Shoe Div., 25 W. 43rd St., New York, N. Y.
McBurney, A. D., 939 W. 6thSt., Los Angeles 14, Calif.
McCable Mfg. Co., 9 Water St., Lawrence, Mass.
McCauley Alloy Co., 3411 Dixie Highway, Steger, Ill.
McClary & Byers Equip. Co., 731 55thSt., Oakland 9, Calif.
McDonald Co., Inc., The, 805 W. 4th St., Reno, Nev.
McDonald, B. F., Co., 5112 S. Hoover St., Los Angeles 37, Calif.
McFerron Myers Prods. Co., Box 2875, Rocky River 16, Ohio
McGill Mfg. Co., 259 Indiana Ave., Valparaiso, Ind.
McGoneral Mfg. Co., Railroad Ave. & Mozart St., E. Rutherford, N. J.
McGraw Hill Book Co., 330 W. 42nd St., New York, N. Y.
McKay Co., 1005 Liberty Ave., Pittsburgh, Pa.
MacDermid, Inc., Waterbury 88, Conn.
MacLeod Co., The, 2232-2240 Bogen St., Cincinnati 22, Ohio
MacMillan Co., 60 Fifth Ave., N. Y. 11, N. Y.

M

M-B Products, 130 E. Larned St., Detroit 26, Mich.
Machlett Labs., Hope St., Springdale, Conn.
Macklin Co., 2914 Wildwood Ave., Jackson, Mich.
Mall Tool Co., 7740 S. Chicago Ave., Chicago 19, Ill.
Manco Mfg. Co., Washington Ave. & Grove Sts., Bradley, Ill.
Magnaflux Corp., 5900 Northwest Highway, Chicago 31, Ill.
Magnolia Metal Co., 18 W. Jersey St., Elizabeth, N. J.
Mahr Mfg. Co., Div. Diamond Iron Works, 1728 N. Second St., Minneapolis 11, Minn.
Maitlen & Benson Inc., 1395 Obispo Ave., Long Beach 4, Calif.
Major Products Co., 601 Hughes Ave., Des Moines 15, Iowa
Mallory, P. R. & Co., Inc., 3029 E. Washington St., Indianapolis 6, Ind.
Manganese Steel Forge Co., Richmond St. & Castor Ave., Philadelphia 34, Pa.
Manning Maxwell & Moore Inc., Shaw-Box Crane & Hoist Div., Broadway & Park Ave., Muskegon, Michigan
Manual Arts Press, 237 N. Monroe St., Peoria 3, Ill.
Manufacturer's Brush Co., The, 12501 Elmwood Ave., Cleveland 11, Ohio.
Marcus Transformer Co., Inc., 32-34 Montgomery St., Hillside 5, N. J.
Marion Electrical Instrument Co., Manchester, N. H.
Marison Co., The, South Elgin, Ill.
Markal Co., 607 N. Western Ave., Chicago 12, Ill.
Market Forge Co., 27 Garvey St., Everett 49, Mass.
Marquette Mfg. Co., Inc., 307 E. Hennepin Ave., Minneapolis 14, Minn.
Marsh Heating Equipment Co., Div. of Jas. P. Marsh Corp., 2073 Southport Ave., Chicago 14, Ill.
Martin Electric Co., 3040 E. Outer Dr., Detroit 12, Mich.
Mason Neilan Regulator Co., 1190 Adams St., Boston 24, Mass.
Massilon Refractories Co., Box 557 Massi, Massilon, Ohio
Master Electric Co., 126 Davis Ave., Dayton 1,Ohio
Master Pneumatic Tool Co., Inc., 2100 Keith Bldg., Orwell, Ohio
Master Rule Mfg. Co., Inc., 815 E. 126th St., N. Y. 54, N. Y.
Master Vibrator Co., 200 Davis Ave., Dayton 1, Ohio
Mauk, A. K., 7501 Hamilton Ave., Pittsburgh 8, Pa.
Maurath, Inc., 21800 Miles Ave., Cleveland 22, Ohio
Mayhew Steel Products, Inc., 30 Bridge St., Shelburne Falls, Mass.
Mechanics Engrg. Co., Jackson, Mich.
Medart Co., 100 Potomac St., St. Louis 18, Mo.
Mellaphone Corp., Inc., 1462 E. Main St., Rochester 2, N. Y.
Merix Chemical Co., 712 Wrigley Bldg., Chicago 11, Ill.
Metal Bond Mfg. Co., 3201 Kossuth Ave., St. Louis 7, Mo.
Metal & Thermit Corp., 120 Broadway N. Y. 5, N.Y.
Metallizing Co. of America, 1330 W. Congress St., Chicago 7, Ill.
Metallizing Engineering Co., Inc., 38-14 30th St., Long Island City 1, N. Y.
Metalspray Co., Inc., 114 W. Elmyra St., Los Angeles 12, Calif.
Metro Mfg. Co., 38-11 31st St., Long Island City 1, N. Y.
Metro-Vise Co., 245 Stephenson Bldg., Detroit 2, Mich.
Metron Instrument Co., 432 Lincoln St., Denver 9, Colo.
Mexico Refractories Co., Love & Cole Sts., Mexico, Mo.
Michigan Abrasive Co., 1111 Bellevue Ave., Detroit, Mich.
Michigan Clamp Co., Box 243, Jackson, Mich.
Michigan Steel Casting Co., 1999 Groin St., Detroit 7, Mich.
Michigan Steel Tube Products Co., 9450 Buffalo St., Detroit 12, Mich.
Micro Products Co., 20 N. Wacker Drive, Chicago, Ill.
Mid States Equipment Co., 2431 S. Michigan Ave., Chicago 16, Ill.
Mid West Abrasive Co., 510 S. Washington St., Owosso, Mich.
Midland Paint & Varnish Co., The, 9125 Reno Ave., Cleveland 5, Ohio
Midwest Piping & Supply Co., Inc., 1450 S. Second St., St. Louis 4, Mo.
Midwest Tool & Mfg. Co., 2254 W. Jefferson Ave., Detroit 16, Mich.
Milburn Co., 3246 East Woodbridge, Detroit 7, Mich.
Miles, John R. R., Inc., 214 4th Ave., S. E., Minneapolis 14, Minn.
Miller Co., The, Meriden, Conn.
Miller Electric Co., 247 Riverside Ave., Jacksonville 4, Fla.
Miller Electric Mfg. Co., 718 S. Bounds St., Appleton, Wisc.
Miller Electric Mfg. Co., 14 N. 10th St., Richmond, Ind.
Millers Falls Co., 57 Wells St., Greenfield, Mass.
Milwaukee Brush Mfg. Co., 2236 N. 30th St., Milwaukee 8, Wisc.
Milwaukee Elec. Tool Corp., 5338 W. State St., Milwaukee 8, Wisc.
Mine Safety Appliances Co., 201 E. Braddock St., Pittsburgh 8, Pa.
Minneapolis Honeywell Reg. Co., 2747 4th Ave., S., Minneapolis, Minn.
Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul 6, Minn.
Mir-O-Col Alloy Co., 2416-60 E. 53rd St., Los Angeles 11, Calif.
Misener Manufacturing Co., Inc., 202-8 S. Walton St., Syracuse, N. Y.
Mississippi Valley Struct. Steel Co., 3117 Big Bend Rd., St. Louis, Mo.
Modern Engineering Co., Inc., 3401-15 Pine Blvd., St. Louis 3, Mo.
Montpelier Glove Co., Montpelier, Ind.
Moorewood Electric & Mfg. Co., Los Angeles 1, Calif.
Moorwood Mfg. Co., 1718 E. Florence St., Los Angeles 1, Calif.
Morey Flux & Chem. Co., 1813 Williamson, Wilmington 99, Del.
Morgan Vise Co., 108 N. Jefferson St., Chicago 6, Illinois
Morse Twist Drill & Machine Co., 163 Pleasant St., New Bedford, Mass.
Morton Salt Co., 310 S. Michigan Ave., Chicago 4, Ill.
Moslo Machinery Co., 2443 Prospect Ave., Cleveland 15, Ohio
Mott Welding Products, Inc., 13905 Mack Ave., Detroit 15, Mich.
Mowatt Co., 24 W. 40th St., N. Y. 18, N. Y.
Mueller Brass Co., 1925 Lapeer Ave., Port Huron, Mich.
Mueller Co., 512 W. Cerro Gordo St., Decatur, Ill.
Mueller Electric Co., 1583 E. 31st St., Cleveland 14, Ohio
Mulconroy Co., 54th & Jefferson St., Philadelphia 31, Pa.
Mullenbach Electric Mfg. Co., 2300 E. 27th St., Los Angeles 11, Calif.
Multi Hydromatic Welding & Mfg. Co., 23171 Groesbec Hwy. East., Detroit, Mich.
Multi Products Tool Co., 123 Sussex Ave., Newark 4, N. J.
Munton Mfg. Co., 9400 Belmont Ave., Franklin Park, Ill.
Murine Co., Inc., 660 N. Wabash Ave., Chicago 11, Ill.

N

Nageldinger, John, & Son Inc., 409 E. 91st St., New York 28, N. Y.
National Carbide Corp., Inc., 60 E. 42nd St., New York 17, N. Y.
National Carbon Co., 30 E. 42nd St., N. Y. 17, N. Y.
National Cylinder Gas Co., 840 N. Michigan Ave., Chicago 11, Ill.
National Elec. Weld. Mach. Co., 1846-1916 N. Trumbull St., Bay City, Mich.
National Foreman's Institute Inc., Deep River, Conn.
National Lead Co., 111 Broadway, N. Y. 6, N. Y.
National Machine Tool Co., 1214 16th St., Racine, Wisc.
National Powder Extinguisher Corp., 50 Rockefeller Plaza, New York 20, N. Y.
National Screw & Mfg. Co., Chester Hoist Div., The Lisbon, Ohio
National Steel Corp., Ecorse, Detroit 18, Mich.
National Supply Co., Terrance, Calif.
National Supply Co., 3320 Bishop St., Toledo 1, Ohio
National Time & Signal Corp., 21800 Wyoming Ave., Detroit 20, Mich.
National Tube Co., Pittsburgh 19, Pa.
National Twist Drill & Tool Co., Rochester, Mich.
National Welders Supply Co., P. O. Box 950, 1228 S. Tryon St., Charlotte, N. C.
National Welding Equipment Co., 218 Fremont St., San Francisco 5, Calif.
Naylor Pipe Co., 1253 E. 92nd St., Chicago, Ill.
Nelson, Herman, Corp., 1824 Third Ave., Moline, Ill.
Nelson Specialty Welding Equip. 440 Peralta Ave., San Leandro, Calif.
Nelson Stud Welding, Div. of Morton Gregory Corp. Toledo & E. 28th Sts., Lorain, Ohio
Nelsonville Fdry & Mach. Co., 1021-81 Chestnut, Nelsonville, Ohio

New Britain Machine Co., South St., New Britain, Conn.
New England Gas Prod. Co., 21 W. St., Charleston, Mass.
New Mexico Steel Co., 510 W. Marquette, Albuquerque, N. M.
N. Y. Belting & Packing Co., 1 Market St., Passaic, N. J.
Newhall Chain Forge & Iron Co., Westwood, N. J.
Niagara Machine & Tool Works 637-697 Northland Ave., Buffalo 11, N. Y.
Nicholson File Co., 23 Acorn St., Providence 1, R.I.
Niles Fire Brick Co., 165 E. Park Ave., Niles, Ohio
Norgren, C. A. Co., 222 Santa Fe Drive, Denver 9, Colo.
North American Mfg. Co., 2910 E. 75th St., Cleveland 4, Ohio
North American Philips Co., Inc., 100 E. 42nd St., New York 17, N. Y.
North American Press, 747 N. 7th St., Milwaukee, Wisc.
North American Refractories Co., 1012 National City Bank Bldg., Cleveland 14, Ohio
Northeast Metals Co., 4124 Torresdale Ave., Philadelphia 24, Pa.
Northern Engineering Works, 2615 Atwater St., Detroit 7, Mich.
Northrop Aircraft Inc., Hawthorne, Calif.
Norton Co., Worcester 6, Mass.
Nox Rust Chemical Corp, 2435 S. Halsted St., Chicago 8, Ill.
Nu Steel Co., 1714 S. Ashland Ave., Chicago 8, Ill.
Nye Tool & Machine Co., 4120 Fullerton Ave., Chicago 39, Ill.

O

O. Z. Electric Mfg. Co., 262 Bond St., Brooklyn 2, N. Y.
Oakite Products, Inc., 22 Thames St., New York 6, N. Y.
Ohio Carbon Co., 12508 Berea Rd., Cleveland 11, Ohio.
Ohio Crankshaft Co., 3800 Harvard Ave., Cleveland 5, Ohio.
Ohio Injector Co., 225 S. Main St., Wadsworth, Ohio.
Ohio Nut & Bolt Co., 610 Front St., Berea, Ohio
Ohio Seamless Tube Co., 132-140 W. Maine St., Shelby, Ohio
Ohlen Bishop Mfg. Co., 901 Ingleside Ave., Columbus 8, Ohio.
Ohmer, George H., P. O. Box 34, Sta. D., Dayton 10, Ohio.
Ohmite Mfg. Co., 4835 W. Flournoy St., Chicago 44, Ill.
Ohmstede Machine Works, 897 N. Main St., Beaumont, Texas.
Oklahoma Oxygen Co., 2750 Sand Spring Rd., Tulsa 1, Okla.
Okonite Co., 946 Canal St., Passaic, N. J.
Olsen, Lester S., 505 W. Cherry St., Milwaukee 12, Wisc.
Olympic Glove Co., 95 Madison Ave., New York 16, N. Y.
Omicron Co., The, 532 W. Windsor Rd., P. O. Box 907, Glendale 4, Calif.
O'Neil-Irwin Mfg. Co., 300 8th Ave., Lake City, Minn.
Optimus Equipment Co., Matawan, N. J.
Osage Metal Co., Inc., 1413 S. Blackwelder Ave., P. O Box 2445, Oklahoma City, Okla.
Osborn Mfg. Co., 5401 Hamilton Ave., Cleveland 14, Ohio.
Osmundson Spade Mfg. Co., Perry, Iowa
Oster Mfg. Co., 2057 E. 61st Pl., Cleveland, Ohio
Overly, Chas. F., Co., 1753 Rosedale Ave., Cleveland 12, Ohio.
Owatonna Tool Co., 200 N. Cedar St., Owatonna, Minn.
Owen Electric Co., Fayetteville, N. C.
Oxford Tool Co., 1633 5-7 N. Second St., Philadelphia 22, Pa.
Oxweld Railroad Service Co., 230 N. Michigan Ave., Chicago 1, Ill.

P

Paasche Airbrush Co., 1909 Diversey Parkway, Chicago 14, Ill.
Pacific Acetylene Co., 2205 Newton Ave., San Diego, Calif.
Pacific Carbide & Alloys Co., 351 California St., San Francisco 4, Calif.
Pacific Engrg. Corp., 3123 San Fernando Rd., Los Angeles 41, Calif.
Pacific Oxygen Co., 2205 Magnolia St., Oakland 7, Calif.
Page Steel & Wire Div., American Chain & Cable Co., Inc., Monessen, Pa.
Paine Co., The, 2951 Carroll Ave., Chicago 12, Ill.
Pako Corp., Minneapolis 11, Minn.
Pal-Weld Mfg. Co., 103 Lander St., Seattle 4, Wash.
Palmer Shile Co., 7107 W. Jefferson Ave., Detroit 17, Mich.
Park Metalware Co., Orchard Park, N. Y.
Parker, Charles Co., 50 Hanover St., Meriden, Conn.
Parker Appliance Co., 17325 Euclid Ave., Cleveland 12, Ohio.
Parker Kalon Corp., 200 Varick St., New York 14, N. Y.
Parker Mfg. Co., 2200 Colorado Ave., Santa Monica, Calif.
Parsons Engineering Corp., 2545 E. 79th St., Cleveland 4, Ohio
Patent Specialties Inc., 4020 Tenth Ave., New York 34, N. Y.
Paulsen Webber Cordage Corp., 170-176 John St., New York 7, N. Y.
Peck, Cecil C. Co., 22701 Lake Shore Blvd., P. O. Box 4038, Cleveland 23, Ohio
Peck Stow & Wilcox Co., Center St., Southington, Conn.
Pedrick Tool & Mach. Co., Inc., 3640 N. Lawrence St., Philadelphia 40, Pa.
Peerless Machine Co., 1600 Junction Ave., Racine, Wisc.
Pelton-Kurtz Supply Co., 2609 E. Larned St., Detroit, Mich.
Peninsular Grinding Wheel Co., 729 Meldrum Ave., Detroit 7, Mich.
Penn Tool & Machine Co., Danville, Ill.
Penn. Salt Mfg., Co., Special Chemicals Dept., Widener Bldg., Phila. 7, Pa.
Penton Publishing Co., The, Penton Bldg., Cleveland 13, Ohio.
Permatex Co., Inc., Sheepshead Bay, Brooklyn 29, N. Y.
Perry Equipment & Supply Co., 1515 W. Thompson St., Philadelphia 21, Pa.
Peters-Dalton Inc., 17902 Ryan Rd., Detroit 12, Mich.
Petersen Mfg. Co., Inc., Dewitt, Nebraska.
Peterson Welding Laboratories, 1423 Virginia Ave., Kansas City 6, Mo.
Philadelphia Chain Block & Mfg. Co., Inc., Mascher & Norris Sts., Philadelphia 22, Pa.
Philadelphia Quartz Co., 125 S. Third St., Philadelphia 6, Pa.
Phillips, C. E., & Co., 2750 Poplar St., Detroit 8, Mich.
Phillips Mfg Co., 3475 Touhy Ave., Chicago, Ill.
Phosphor Bronze Smelting Co., 2200 Washington St., Philadelphia, Pa.
Photologue Publishing Co., 610 West Van Buren St., Chicago, Ill.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
Photovolt Corp., 97 Madison Ave., New York 16, N. Y.
Picker X-Ray Corp., 300 Fourth Ave., New York, 10, N. Y.
Pier Equip. Mfg. Co., 1220-12 Milton, Benton Harbor, Mich.
Pierce Governor Co., Inc., 1609 Ohio Ave., Anderson, Ind.
Pigg, Marvin H., 928 Arnold St., Galesburg, Ill.
Pike, E. W. & Co., Elizabeth, N. J.
Pioneer Welding Mfg. Co., 618 E. Michigan Ave., Kalamazoo 3, Mich.
Pitman Publishing Corp., 2 W. 45th St., New York 19, N. Y.
Pittsburgh Metals Purifying Co., 1352 Marvista St., Pittsburgh 12, Pa.
Pittsburgh Plate Glass Co., Brush Div., 3221 Frederick Ave., Baltimore 29, Md.
Pittsburgh Steel Co., 1642 Grand Bldg., Pittsburgh 30, Pa.
Plastal Mfg. Co., 1212 E. Green St., Pasadena 5, Calif.
Plastic Wire & Cable Co., 403 E. Main St., Jewett City, Conn.
Plibrico Jointless Firebrick Co., 1800 Kingsbury St., Chicago 14, Ill.
Plomb Tool Co., 2209 Sante Fe Ave., Los Angeles 54, Calif.
Plumb, Fayette R., Inc., 4837 James St., Philadelphia 37, Pa.
Plykrome Corp., 70 Pine St., New York 5, N. Y.
Plymouth Equipment & Supply Co., P.O. Box 358, Plymouth, Mich.
Popular Mechanics, 200 E. Ontario, Chicago 11, Ill.
Porter-Cable Machine Co., 1714 N. Salina St., Syracuse 8, N. Y.
Porter, C. O., Machinery Co., 666 Front Ave., Grand Rapids 7, Mich.
Porter, H. K., Inc., 74 Foley St., Somerville 43, Mass.
Potter Instrument Co., 136-56 Roosevelt Ave., Flushing, L. I., N. Y.
Powder Weld Process Co., 419 Kent Ave., Brooklyn 11, N. Y.
Powell, Wm., Co., 2525 Spring Grove Ave., Cincinnati 22, Ohio.
Power Tools, 2657 W. 95th St., Evergreen Park, Ill.
Powermatic Ventilator Co., 4019 Prospect Ave., Cleveland 3, Ohio.
Pratt-Brayman Co., Oskoda, Mich.
Pratt & Whitney Div., Niles Bement Pond Co., West Hartford 1, Conn.
Precision Engineering Div., 4632 W. Armitage Ave., Chicago 39, Ill.
Precision Prod. Corp., 212 N. 40th St., Duluth 7, Minn.
Precision Scientific Co., 1736-54 N. Springfield Ave., Chicago 47, Ill.
Precision Welder & Machine Co., 138 E. McMicken Ave., Cincinnati 32, Ohio.
Pressed Steel Tank Co., 1445 S. 66th St., Milwaukee 14, Wisc.
Presstite Engrg. Co., 3900 Chouteau Ave., St. Louis 10, Mo.
Prier Brass Mfg. Co., 7719 15th St., Kansas City, Mo.
Production Devices, Inc., N. William St., Whitehall, N. Y.
Progressive Welder Co., 3050 E. Outer Drive, Detroit 12, Mich.
Pulmosan Safety Equip. Corp., 176 Johnson St., Brooklyn 1, N. Y.
Punch Lock Co., 321 N. Justine St., Chicago 7, Ill.
Purdue Mfg. Co., 619 W. Washington St., Chicago 6, Ill.
Pure Carbon Co., Inc., Hall Ave., St. Mary's, Pa.
Puritan Compressed Gas Corp., 2012 Grand Ave., Kansas City 8, Mo.
Purity Cylinder Gases, Inc., 574 South Division Ave., Grand Rapids 3, Mich.
Pynosol Laboratories, Inc., 1714 S. Ashland Ave., Chicago 8, Ill.
Pyrene Mfg. Co., 560 Belmont Ave., Newark 8, N. J.

Q

Quadriga Mfg Co., 213 W. Grand Ave., Chicago 10, Ill.
Quaker Chem. Prods. Corp., Conshohocken, Pa.
Quaker Rubber Corp., 4915 Comly St., Philadelphia 24, Pa.
Quality Tools Corp., New Wilmington, Pa.
Quigley Co., Inc., 527 5th Ave., New York 17, N. Y.

R

R-D Co., P.O. Box 912, Flint, Mich.
R-S Prods. Corp., 4530 Germantown Ave., Philadelphia 44, Pa.
Rabin Glove Co., 407 Grove St., Jersey City, N. J.
Racine Tool & Machine Co., 1760 State St., Racine, Wisc.
Radiant Lamp Corp., 300 Jelliff Ave., Newark 8, N. J.
Radio Corp. of America, Camden, N. J.
Radio Corp. of America, R.C.A. Tube Dept., 415 S. 5th St., Harrison, N. J.
Radium Chemical Co., Inc., 570 Lexington Ave., New York 22, N. Y.
Ragel, J. M., Industries, 4029 Indiana Ave., Kansas City 4, Mo.
Railway & Industrial Engrg. Co., Greensburg, Pa.
Railway Track Work Co., Clementine, Thompson & Mercer Sts., Philadelphia, Pa.
Randall Mfg. Co., 1852 Burlington Ave., N. Kansas City 16, Mo.
Randolph Laboratories, Inc., 8 East Kinzie St., Chicago 11, Ill.
Rankin Mfg. Co., 3072 West Pico Blvd., Los Angeles 6, Calif.
Ransome Machy. Co., Dunellen, N. J.
Rapid Mfg. Co., Inc., 6305 San Fernando Rd., Glendale 1, Calif.
Rapid Titan Mfg. Co., 635 Michigan Trust Bldg., Grand Rapids 2, Mich.
Rapidesign, Inc., 111 B. South Orange St., Glendale 4, Calif.
Rasmussen Iron Works, 1007 W. Philadelphia St., Whittier, Calif.
Ray Proof Corp. 330 E. 26th St., New York 10, N. Y.
Raybestos-Manhattan, Inc., Asbestos Textile & Packing Div., Manheim, Pa.
Raybestos Manhattan, Inc., Manhattan Rubber Div., 61 Willett St., Passaic, N. J.
Raybestos-Manhattan, Inc., 42 Townsend St., Passaic, N. J.
Raytheon Mfg. Co., Commercial Products Div., Waltham 54, Mass.
Reading, Pratt & Cady Div. of American Chain & Cable Co., Inc., Reading, Pa.
Red Devil Tools Inc., 130 Colt St., Irvington, N. J.
Reed Engineering Co., 1003-17 Fairview Ave., Carthage, Mo.
Reed Mfg. Co., 1425 W. 8th St., Erie, Pa.
Rees, Mackworth G., Inc., 1573 E. Forest St., Detroit 7, Mich.
Reid-Avery Co., Dundalk, Baltimore 22, Md.
Reiner & Campbell Co., Inc., 667 Norwood Terr., Elizabeth 2, N. Y.
Reinhold Publishing Co., 330 W. 42nd St., New York 18, N. Y.
Reliance Steel Div., Detroit Steel Corp., 1170 Ivanhoe Rd., Cleveland 10, Ohio.
Reltool Corp., 712 W. Michigan St., Milwaukee 3, Wisc.
Remont Manufacturing Co., Lombard, Ill.
Republic Drill & Tool Co., 322 S. Green St., Chicago, Ill.
Republic Rubber Div., Lee Tire & Rubber Corp., Albert St., Youngstown 1, Ohio.
Republic Steel Corp., 224 E. 131st St., Cleveland 8, Ohio.
Research Industries, Ltd., 419 Book Bldg., Detroit 26, Mich.
Resistance Welder Corp., General Motors Bldg., Detroit, Mich.
Resistance Welder Mfrs. Assoc., 505 Arch St., Philadelphia, Pa.
Resisto-Loy Co., 127 Baylis St., S.W., Grand Rapids 7, Mich.
Resistoflex Corp., 39 Planeson St., Belleville 9, N. J.
Revere Copper & Brass Inc., 230 Park Ave., New York 17, N. Y.
Revolvator Co., State St. at Bergen Tpke., North Bergen, N. J.
Rex Welder & Engrg. Co., 1910 Walnut St., Kansas City 8, Mo.
Reynolds Metals Co., 2000 S. Ninth St., Louisville 1, Ky.
Richards, Arklay S., Co., Inc., New Highlands 61, Mass.
Richards Wilcox Mfg. Co., 176 Third St., Aurora, Ill.
Ridge Tool Co., Elyria, Ohio.
Riehle Testing Machine Div., American Machine & Metals, Inc., E. Moline, Ill.
Ripley Co., Inc., Factory St., Middletown, Conn.
Riverside Iron Works, Ltd., 803 24th Ave., S.E., Calgary, Alberta, Canada.
Riverside Machinery Co., 10632 S. Michigan Ave., Chicago, Ill.
Riverside Metal Co., Riverside, Burlington Co., N. J.
Roberts, R. D., 2439 N. Cambridge Ave., Chicago 14, Ill.
Roberts, Weldon, Rubber Co., 351 Sixth Ave., Newark 7, N. J.
Robertson Mfg. Co., Trenton 5, N. J.

Robbins & Myers, Inc., Hoist & Crane Div., 1345 Lagonda Ave., Springfield 99, Ohio.
Robvon Corp., 2440 Larimer St., Denver 2, Colo.
Rockuber Corp., Rapid City, S. Dak.
Rockwell, W. S., Co., 50 Church St., New York 7, N. Y.
Roebling's, John A., Sons Co., 640 S. Broad St., Trenton 2, N. J.
Roesch Tool Products, 8913 Olin St., Los Angeles 34, Calif.
Rome Cable Corp., Rome, N. Y.
Roots Connersville Blower Corp., 900 W. Mount St., Connersville, Ind.
Ross, J. O., Engineering Corp., 350 Madison Ave., New York 17, N. Y.
Rotor Tool Co., The, 17325 Euclid Ave., Cleveland 12, Ohio.
Round, David & Son, Broadway & Henry Sts., Cleveland 5, Ohio.
Rubicon Co., Ridge Ave. at 35th St., Philadelphia, Pa.
Ruby Chemical Co., 68-70 McDowell St., Columbus 8, Ohio.
Ruemelin Mfg. Co., 3860 N. Palmer St., Milwaukee 12, Wisc.
Russell Electric Co., 340 W. Huron St, Chicago 10, Ill.
Russell, Frank, Glove Co., Berlin, Wisc.
Russell & Stoll Co., 125 Barclay, New York 7, N. Y.
Rust Oleum Corp., 2413 Oakton St., Evanston, Ill.
Rustless Iron & Steel Corp., Baltimore 13, Md.
Ryerson, J. T., & Son, Inc., 2558 W. 16th St., Chicago 8, Ill.
Ryman Engineering Co., 523 Spring Ave., Ellwood City, Pa.

S

S. C. Leather Co., 819 Fifth Ave., Pittburgh 19, Pa.
S-M-S Corp., 1165 Harper St., Detroit 11, Mich.
SKF Steels, Inc., 420 Lexington Ave., N. Y. 17, N. Y.
Safety Clothing & Equip. Co., 7016 Euclid Ave., Cleveland 3, Ohio.
Safety Equipment Service Co., 223 Rose Bldg., Cleveland, Ohio.
Safety Gas Lighter Co., 56 Sanderson Ave., Lynn, Mass.
Safety Grinding Wheel Co., 2258 Columbus Ave., Springfield, Ohio.
St. John X-Ray Lab., Califon, N. J.
St. Pierre Chain Corp., 50 Frank St., Worcester 4, Mass.
Salem Tool Co., 767 S. Ellsworth Ave., Salem, O.
Sales Service Mach. Tool Co., 2363 University Ave., St. Paul 4, Minn.
Salsbury Corp., 1161 East Florence Ave., Los Angeles 1, Calif.
Sand-O-Flex Corp., 4373 Melrose Ave., Los Angeles 27, Calif.
Sandusky Abrasive Wheel Co., 715 W. Ransom St., Kalamazoo, Mich.
Sandvik Saw & Tool Corp., 47 Warren St., New York 7, N. Y.
Sasgen Derrick Co., 3101 W. Grand Ave., Chicago 22, Ill.
Saylor Beall Mfg. Co., St. John, Mich.
Scherr, George, Co., Inc., 200 Lafayette St., New York 12, N. Y.
Schnell Mills, Inc., 53 West Jackson Blvd., Chicago, Ill.
Schoenberger, J. W., Co., 8810 Harvard St., Cleveland, Ohio.
Schoitz Engrg. Works, Waterloo, Iowa.
Schrader's, A., Son Div. of Scovill Mfg. Co., Inc., 470 Vanderbilt Ave., Brooklyn 17, N. Y.
Schramm, Inc., West Chester, Pa.
Schwerdtle Stamp Co., 166 Elms St., Bridgeport 3, Conn.
Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
Scientific Elec., 119 Monroe St., Garfield, N. J.
Scientific Research Co., 1618 N. Vancouver Ave., Portland 12, Oregon.
Scott Mfg. Co., 11 E. 17th St., Kansas City 8, Mo.
Scovill Mfg. Co., 99 Mill St., Waterbury 91, Conn.
Sears Roebuck & Co., 925 S. Homan Ave., Chicago 7, Ill.
Security Valve Co., 410 N. San Fernando Rd., Los Angeles 31, Calif.
Selas Corp. of Amer., Erie Ave. & D St., Philadelphia 34, Pa.
Sell, H. H., Electric Co., 1907 Willow Ave., N., Minneapolis 11, Minn.
Sellstrom Mfg. Co., 626 N. Aberdeen St., Chicago 22, Ill.
Seymour Mfg. Co., The, 15 Franklin St., Seymour, Conn.
Shallcross Mfg Co., 520 Pusey Ave., Colkingdale, Pa.
Sharon Steel Corp., Sharon, Pa.
Shawinigan Products Corp., Empire State Bldg., New York 1, N. Y.
Sheffield Corp., Dayton 1, Ohio.
Sheldon Machine Co., Inc., 4258 N. Knox Ave., Chicago 41, Ill.
Sherman & Co., 197 Canal St., New York 13, N. Y.
Sherman, H. B., Mfg. Co., 22 Barney St., Battle Creek, Mich.
Shober Sales, Inc., 900 W. Weber Ave., Stockton, Calif.
Shook Bronze Corp., Greenlawn & Lake Sts., Lima, Ohio.
Shoot-A-Lite Corp., 118 E. 28th St., New York 16, N. Y.
Shrader, F. W., Co., 5788 W. Washington Blvd., Culver City, Calif.
Siewek Tool Co., 2862 E. Grand Blvd., Detroit 2, Mich.
Sight Feed Generator Co., 14 North 10th St., Richmond, Ind.
Silent Hoist Winch & Crane Co., 841-877 63rd St., Brooklyn 20, N. Y.
Simonds Abrasive Co., Tacony & Fraley Sts., Philadelphia 37, Pa.
Simonds Saw & Steel Co., 470 Main St., Fitchburg, Mass.
Simonds, Worden White Co., 1101 Negley Place, Dayton 6, Ohio.
Simplex Wire & Cable Co., 79 Sidney St., Cambridge 39, Mass.
Singer Leather Co., 129 N. 12th St., Philadelphia 7, Pa.
Sinonski, Gilbert S., 401 N. Broad St., Philadelphia 8, Pa.
Skilsaw, Inc., 5033 Elston Ave., Chicago 30, Ill.
Skinner, M. B., Co., 3502 W. Sample St., South Bend, Ind.
Smith, A. O., Corp., 3533 N. 27th St., Milwaukee 10, Wisc.
Smith, Gordon Co., Bowling Green, Ky.
Smith, G. W., & Sons, 5400 Kemp Rd., Dayton 3, Ohio.
Smith, Seymour & Sons, Inc., Box 591, Oakville, Conn.
Smith Welding Equip. Corp., 2633 Fourth St., S.E., Minneapolis 4, Minn.
Smooth-On Mfg. Co., 568-574 Communipaw Ave., Jersey City 4, N. J.
Snap Tite, Inc., 1710 French St., Erie, Pa.
So-Lo Works, Twight Wee Rd., Loveland, Ohio.
Solar Aircraft Co., 2200 Pacific Highway, San Diego 12, Calif.
Solar Mfg. Corp., 1445 Hudson Blvd., North Bergen, N. J.
Solo Horton Brush Co., Inc., 135 W. 19th St., New York 11, N. Y.
Solventol Chem. Prods., Inc., 15841 Second Blvd., Detroit 3, Mich.
Sonneborn, L., Sons, Inc., 88 Lexington Ave., New York 16, N. Y.
South Mica Co., Johnson City, Tenn.
Southern Oxygen Co., 2900 Kenilworth Ave., Bladensburg, Md.
Southwest Welding & Mfg. Co., Alhambra, Calif.
Spartan Saw Works, Inc., 152 Fisk Ave., Springfield 7, Mass.
Special Chemicals Corp., 30 Irving Place, New York 3, N. Y.
Special Welding Alloy Co., Inc., 27-29 Jackson Ave., Long Island City 1, N. Y.
Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero, Ill.
Speer Carbon Co., Theresia St., St. Marys, Pa.
Sperry Products, Inc., 1505 Willow St., Hoboken, N. J.
Spring Specialty Co., 1219 W. Madison St., Maywood, Ill.
Square D Co., 4041 N. Richards St., Milwaukee 12, Wisc.
Sta Warm Electric Co., 111 N. Chestnut St., Ravenna, Ohio.
Stackpole Carbon Co., St. Marys, Pa.
Stahmer Farm Equipment Co., 135 S. La Salle St., Chicago 3, Ill.
Standard Electrical Tool Co., 2491-96 River Rd., Cincinnati 4, Ohio.
Standard Electrode & Mfg. Co., 445 E. High St., Philadelphia 44, Pa.
Standard Machinery Co., 1475 Elmswood Ave., Providence 7, R. I.
Standard Pressed Steel Co., Jenkintown, Pa.
Standard Safety Equip. Co., 232 W. Ontario St., Chicago 10, Ill.
Standard Steel & Wire Co., Bolivar, Pa.
Standard Tool Co., 6918 Central Ave., Cleveland 4, Ohio.
Standard Tube Co., 24400 Plymouth Rd., Detroit 28, Mich.
Standard X-Ray Co., 1932 N. Burling St., Chicago 14, Ill.
Stanley Elec. Tools, Div. of the Stanley Works, New Britain, Conn.
Stanley Tools, Div. of the Stanley Works, 111 Elm St., New Britain, Conn.
Star Mfg. Co., Div. of Illinois Iron & Bolt Co., Carpentersville, Ill.
Starrett, L. S., Co., Crescent St., Athol, Mass.
Stearns, Roger, Mfg. Co., 1720 California St., Denver 2, Colo.
Steel Sales Corp., 3348 S. Pulaski Rd., Chicago 23, Ill.
Steele Gases, Inc., 126 N. Dearborn St., Chicago 2, Ill.
Steiner-Ives Co., 14 Ave. L., Newark 5, N. J.
Stephens-Adamson Mfg. Co., 9 Ridgeway Ave., Aurora, Ill.
Sterling Grinding Wheel Co., Tiffin, Ohio.
Sterling Tool Products Co., 362 E. Ohio St., Chicago 11, Ill.
Sterling Utilities Co., Inc., 74 Sedgwick St., Brooklyn 2, N. Y.
Stevens, C. H., & Co., Inc., 15 Ann St., S. Norwalk, Conn.
Stevens-Walden, Inc., 475 Shrewsbury St., Worcester 4, Mass.
Stevenson, Jordan & Harrison, 480 Lexington Ave., New York 17, N. Y.
Stewart Iron Works Co., Inc., The, 1537 Stewart Block, Cincinnati 1, Ohio.
Stewart, Park, Box 101, Worthington, Pa.
Stewart-Warner Corp., 1826 Diversey Parkway, Chicago 14, Ill.
Stone-Ryals Elec. & Mfg. Co., 479 Natoma St., San Francisco 3, Calif.
Stoody Co., 1134 Slauson Ave., Whittier, Calif.
Stow Mfg. Co., 443 State St., Binghampton, N. Y.
Strand, N. A., & Co., 5001-9 North Wolcott St., Chicago 40, Ill.
Streichert, E. J., 1747 N. Pulaski Rd., Chicago 39, Ill.
Strobel, Carl, Corp., 4700 Santa Fe, Los Angeles, Calif.
Strong, Carlisle & Hammond Co., 1392-1394 W. 3rd St., Cleveland 13, Ohio.
Struthers Wells Corp., 1003 Pennsylvania Ave., Warren, Pa.
Stulz-Sickles Co., 134 Lafayette St., Newark 5, N. J.
Sturtevant, B. F., Co., Div. of Westinghouse Elec., Hyde Park, Boston 36, Mass.
Sulfo, Inc., 1143-45 E. Jersey St., Elizabeth, N. J.
Sun Oil Co., 1608 Walnut St., Philadelphia 3, Pa.
Sunbeam Stewart Industrial Furnace Div., Sunbeam Corp., 4433 W. Ogden Ave., Chicago, Ill.
Sunbury Wire Rope Mfg. Co., 880 S. Second St., Sunbury, Pa.
Super Tool Co., 21650 Hoover Rd., Detroit 13, Mich.
Superior Air Products Co., 132 Malvern St., Newark, N. J.
Superior Carbon Products, Inc., 9115 George St., Cleveland, Ohio.
Superior Flake Graphite Co., 33 S. Clark St., Chicago 3, Ill.
Superior Flux Co., 1302 Ontario St., Cleveland 13, Ohio.
Superior Industrial Gas Corp., 23-34 47th St., Long Island City, N. Y.
Superior Mfg. Co., 1302 Ontario St., Cleveland 13, Ohio.
Superior Oxy-Acetylene Mach. Co., 1102 High St., Hamilton, Ohio.
Superior Steel Corp., Carnegie, Pa.
Superior Tube Co., Box 191, Norristown, Pa.
Superior Tube Corp., Chicago, Ill.
Superior Valve & Fittings, West Liberty Ave. & Brookside, Pittsburgh 26, Pa.
Surface Combustion Co., 2375 Dorr St., Toledo 1, Ohio.
Swartwout Co., 18511 Euclid Ave., Cleveland 12, Ohio.
Swartz & White Mfg. Co., Binghamton Flexible Shaft Div., 243-45 Water St., Binghamton, N. Y.
Swedish Iron & Steel Corp., 17 Battery Place, New York, N. Y.
Swift Electric Welder Co., 8095 Livernois St., Detroit 4, Mich.
Sylvania Electric Prods. Corp., 500 Fifth Ave., New York 18, N. Y.
Syntron Co., 900 Lexington Ave., Homer City, Pa.

T

Taco West Corp., 2620 S. Park Ave., Chicago, Ill.
Tal Bender, Inc., 417 N. Water St., Milwaukee 2, Wisc.
Tate, Jones & Co., 804 Plaza Bldg., Pittsburgh 19, Pa.
Taylor, S. G., Chain Co., 3 141st St., Hammond, Ind.
Taylor Cylinder Div., Cuneo Press, 2262 S. Grove St., Chicago, Ill.
Taylor Forge & Pipe Works, P.O. Box 485, Chicago 90, Ill.
Taylor Instrument Co., 95 Ames St., Rochester, N. Y.
Taylor Wharton Iron & Steel Co., High Bridge, N. J.
Taylor Winfield Corp., 1052 Mahoning, Warren, Ohio.
Tempil Corp., 132 West 22nd St., New York 11, N. Y.
Templeton, Kenly & Co., 1020 S. Central Ave., Chicago 44, Ill.
Temprite Products Corp., 47 Piquette St., Detroit 2, Mich.
Tenn. Coal, Iron & R. R. Co., United States Steel Corp., 20th St. and First Ave. N., P.O. Box 2634, Birmingham 2, Ala.
Teuscher Pulley & Belting Co., 801 N. Second St., St. Louis, Mo.
Thermacote Co., 420 S. San Pedro St., Los Angeles 13, Calif.
Thermex Equip. Co., 3436 Book Bldg., Detroit, Mich.
Thermo Elec. Mfg. Co., 497 W. Locust St., Dubuque, Iowa.
Thomas Machine Mfg. Co., Pittsburgh, Pa.
Thompson & Co., 1085 Allegheny Ave., Oakmont, Pa.
Thompson Engrg. Co., 200 N. Division Bldg., Grand Rapids 2, Mich.
Thompson, H. G., & Son Co., 277 Chapel St., New Haven 5, Conn.
Thompson Products, Inc., Cleveland 3, Ohio.
Thomson Electric Welder Co., 261 Pleasant St., Lynn, Mass.
Threadwell Tap & Die Co., 16 Arch St., Greenfield, Mass.
Tillman, John & Co., 1561 W. 19th St., Long Beach, Calif.
Timken Roller Bearing Co., 1835 Dueber Ave., Canton 6, Ohio.
Tipaloy, Inc., 1435 E. Milwaukee St., Detroit 11, Mich.
Titan Metal Mfg. Co., Sieg & Craig Sts., Bellefonte, Pa.
Titanium Alloy Mfg. Co., Box C Bridge Sta., Niagara Falls, N. Y.
Titanium Pigment Corp., 111 Broadway, New York 6, N. Y.
Tnel Mfg. Co., Box 224, 17 Collet St., Hornell, N. Y.
Tocco Div., Ohio Crankshaft Co., Cleveland, Ohio.
Toledo Pipe Threading Machine Co., 1445 Summit St., Toledo 4, Ohio.

Topeka Fdry. & Iron Wks., 321 Jackson St., Topeka, Kansas.
Torchweld Equipment Co., 1035 W. Lake St., Chicago, Ill.
Torit Mfg. Co., 303 Walnut St., St. Paul 2, Minn.
Trane Co., The, La Crosse, Wisc.
Trent Tube Mfg. Co, East Troy, Wisc.
Trex Engineering Supply Co., Newark 5, N. J.
Tri-Arc Corp., 6859 S. Anthony St., Chicago 37, Ill.
Trimont Mfg. Co., Div. of Aetna Industrial Corp., 55-71 Armory St., Roxbury, Boston, Mass.
Trindl Products, Ltd., 17 East 23rd St., Chicago 16, Ill.
Triplet & Barton, Inc., 831 N. Lake St., Burbank, Calif.
Trumbull Elec. Mfg. Co., 41 Woodford Ave., Plainville, Conn.
Truscon Steel Co., Youngstown, Ohio.
Tube Turns, Inc., 224 E. Broadway, Louisville 1, Ky.
Tubular Alloy Steel Corp., Gary, Ind.
Tubular Micrometer Co., St. James, Minn.
Tubular Service Corp., 32 Broadway, New York 4, N. Y.
Turco Prods., Inc., 6135 S. Central Ave., Los Angeles 1, Calif.
Turner Brass Wks, 800-810 Park Ave., Sycamore, Ill.
Tweco Products Co., 1024 E. English, Wichita 1, Kan.
Tweezer-Weld Corp., 1060 Broad St., Newark 2, N. J.
Twentieth Century Mfg. Co., 719 S. 3rd St., Minneapolis 15, Minn.

U

Uniflex Cable Co., 738 West Seven Mile Rd., Detroit 3, Mich.
Union Carbide & Carbon Corp., 30 East 42nd St., New York 17, N. Y.
Union Stop Fire Corp., Brooklyn, N. Y.
Union Twist Drill Co., Butterfield Div., Derby Line, Vt.
Unique Mfg. Co., 221 W. Walton St., Chicago, Ill.
United Blower Co., Inc., 193 Center St., New York 13, N. Y.
United Electronics Co., 42 Spring St., Newark 2, N. J.
U. S. Electric Welder Corp., 1258 Dorr St., Toledo 7, Ohio.
U. S. Electrical Tool Co., 1050 Findlay St., Cincinnati 14, Ohio.
U. S. Gauge Div., American Machine & Metals, Inc., Sellersville, Pa.
U. S. Rubber Co., 1230 Sixth Ave, New York 20, N. Y.
U. S. Rubber Co., Wire & Cable Dept., 1230 Ave. of the Americas, New York 20, N. Y.
U. S. Steel Corp. of Dela., 437 Seventh Ave., Pittsburgh 30, Pa.
U. S. Steel Supply Co., 1319 W. Wabansia Ave., Chicago 90, Ill.
United Welded Products, Inc., Sussex, Wisc.
United Welding Service Co., Eclipse Rd., Box 564, Franklin, Pa.
United Wire & Supply Corp., 1497 Elmwood Ave., Providence 7, R. I.
Universal Engineering Co. of San Diego, 2230-32 National Ave., San Diego 2, Calif.
Universal Leather Co., 114 Pierce St., Berlin, Wisc.
Universal Welder Corp., 735 Carnegie Ave., Cleveland 15, Ohio.
Universal Welding Supply Co., 1235 W. 95th St., Chicago, Ill.
Universal Wheel & Abrasive Corp., 400 N. Ashland Ave., Chicago 22, Ill.
Univis Lens Co., 401 Leo St., Dayton 4, Ohio.
Upham, Philips Webb, & Co., 148 York St., New Haven 11, Conn.
Upson Walton Co., Perry Payne Bldg., Cleveland 13, Ohio.
Upton Electric Furnace Div., 7450 Melville at Green, Detroit, Mich.
Utica Drop Forge & Tool Corp., 2415 Whitesboro St., Utica 4, N. Y.

V

Vacu Blaster Co., 272 Fremont St., San Francisco 5, Calif.
Valley Electric Corp., 4221-27 Forest Pk. Blvd., St. Louis 8, Mo.
Valley Oxygen Co., 1123 Washington Ave., Bay City, Mich.
Valve Mfg. Corp., 666 E. Wabash Ave., Decatur, Ill.
Van Dorn Electric Tool Co., 716 E. Joppa Rd., Towson 4, Md.
Van Dorn Iron Works Co., The, 2685 E. 79th St., Cleveland 4, Ohio.
Van Hoffman Press, 105 S. 9th St., St. Louis 2, Mo.
Van Nostrand, D., Co., Inc., 250 4th Ave., New York 3, N. Y.
Vande Mfg. Co., 1837 S. Michigan Ave., Chicago 16, Ill.
Vangtronic Corp., 237 John St., Bridgeport 3, Conn.
Varkell, Paul, Co., 37 West 39th St., New York, N. Y.
Vascoloy-Ramet Corp., 800 Market St., Waukegan, Ill.
Verson All-Steel Press Co., 1355 E. 93rd St., Chicago 19, Ill.
Victor Balata & Textile Belting Co., 53 Park Pl., New York 7, N. Y.
Victor Electric Prods., Inc., 2950 Robertson Rd., Cincinnati 9, Ohio.
Victor Electric Wire & Cable Corp., 130 Lafayette St., New York 13, N. Y.
Victor Equip. Co., 844 Folsom St., San Francisco 7, Calif.
Victor Saw Works, Inc., 22 Cottage St., Middletown, N. Y.
Vincent Steel Process Co., 2424 Bellevue Ave., Detroit 7, Mich.
Vitrified Wheel Co., Westfield, Mass.
Vlchek Tool Co., 3000 E. 87th St., Cleveland, O.
Vogel Tool & Die Corp., 2725 Moffat St., Chicago 47, Ill.
Voss Machinery Co., 2882 W. Liberty Ave., Pittsburgh 16, Pa.
Vulcan Corp., 18 & Cherry St., Philadelphia 3, Pa.
Vulcan Electric Co., 88-90 Holten St., Danvers, Mass.

W

Wagner Electric Corp., 6000 Plymouth Ave., St. Louis 14, Mo.
Wagner, A. F., Iron Wks., 1905 S. First St., Milwaukee 1, Wisc.
Wagner Mfg. Co., Inc., 115 S. First West St., Jackson, Mo.
Waitcus Mfg. Co., 640 South Clark St., Chicago, Ill.
Walker Turner Co., Inc., South Ave. at Berckman St., Plainfield, N. J.
Wall Colmonoy Corp., 19345 John R St., Detroit, Mich.
Wallen, G. J., Mfg. Co., 617 Bryant St., San Francisco 7, Calif.
Walls Sales Corp., 306 East 38th St., New York 16, N. Y.
Warner Brothers Co., The, Bridgeport 2, Conn.
Warner Industries, Inc., 118-124 W. Pearl St., Cincinnati 2, Ohio.
Warren City Mfg. Co., Warren, Ohio.
Washington Steel Corp., Washington, Pa.
Watchemoket Optical Co., Inc., 232 W. Exchange St., Providence 3, R. I.
Watson Stillman Co., 100 Aldene Rd., Roselle, N. J.
Waverly Petroleum Products Co., Drexel Bldg., Philadelphia 6, Pa.
Wayne Chemical Prod. Co., 9600 Copeland Ave., Detroit 17, Mich.
Wearaloy Co., 4170 E. Washington Blvd., Los Angeles, Calif.
Weatherhead Co., 300 E. 131st St., Cleveland 8, Ohio.
Webb Corp., The, 402 E. Main, Webb City, Mo.
Webber Lacey Co., 234 E. Water St., Kalamazoo 2, Mich.
Wedge Protectors, Inc., 3985 Jennings St., Clevelond, Ohio.
Weiger Weed & Co., Div. of Fansteel Metallurgical Corp., 11644 Cloverdale Ave., Detroit 4, Mich.
Weinberg & McKee, 610 West Van Buren St., Chicago, Ill.
Weldaloy Products Co., 20869 Mound Rd., P.O. Box 145, Detroit 12, Mich.
Weldclo Mfg. Co., 253 Market St., Philadelphia 6, Pa.
Welded Truck & Specialty Co., Inc., 1849 West Grand Ave., Chicago 22, Ill.
Welder's Products & Mfg. Co., 1420 So. 13th, Omaha 9, Nebr.
Welders Supply & Mfg. Co., 108 W. Central Parkway, Cincinnati 10, Ohio.
Welderz Frend Gentrator Co., 28th & Ave. G., Box 1674, Lubbock, Texas.
Weldex, Inc., 7339 McDonald Ave., Detroit 10, Mich.
Welding Alloys Mfg. Co., 744 Broad St., Newark 2, N. J.
Welding Apparatus Co., 2750 W. Van Buren St., Chicago 12, Ill.
Welding & Cutting Materials Co., 1852 Burlington Ave., No. Kansas City, Mo.
Welding Engrg. Corp., 264 E. Ogden Ave., Milwaukee 2, Wisc.
Welding Equip. & Service Co., 2123 Texas St., El Paso, Texas.
Welding Equip. & Supply Co., 223 Leib St., Detroit 7, Mich.
Welding Gas Products Co., 821 E. 11th St., Chattanooga 1, Tenn.
Welding Machines Mfg. Co., 17325 Lamont Ave., Detroit 12, Mich.
Welding Sales & Engr. Co., 8750 Grinnel St., Detroit 13, Mich.
Welding Service Sales Inc., 926 Howard St., San Francisco 1, Calif.
Weldit, Inc., 990 Oakman Blvd., Detroit 6, Mich.
Weldon Roberts Rubber Co., Brightboy Industrtial Division., 351-365 Sixth Ave., Newark 7, N. J.
Weldrite Co., Inc., 29-33 14th Rd., Long Island City 1, N. Y.
Wells Mfg. Corp., 606 Adams St., Three Rivers, Mich.
Wells, Martin Co., 5886 Compton Ave., Los Angeles, Calif.
Welsh Mfg. Co., 54 Troy St., Providence 9, R. I.
Weltronic Co., 19500 W. 8 Mile Rd., Detroit 13, Mich.
Wen-Lyn Products, 903 S. Main St., Burbank, Calif.
Wesley Lacquer Co., 93 Fourth St., Brooklyn 31, N. Y.
West Point Mfg. Co., 19643 Merriam St., Farmington, Mich.
West Texas Oxygen Co., 2706 Avenue H., Lubbock, Texas.
Western Chain Co., 1819 Belmont Ave., Chicago 13, Ill.
Western Tool & Mfg. Co., The, 1620 E. Pleasant St., Springfield, Ohio.
Western Wire Prods. Co., 1314 So. 18th St., St. Louis 4, Mo.
Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh 30, Pa.
Westinghouse Elec. Corp., Sturtevant Div., Hyde Park, Mass.
Wetzler Clamp Co., 43-15 11th St., Long Island City 1, N. Y.
Wheeler, Kight & Gainey, Inc., 74 E. Long St., Columbus, Ohio.
Wheeler Protective Apparel, Inc., 224 West Huron St., Chicago 10, Ill.
Wheeling Steel Corp., Wheeling Steel Corp. Bldg., Wheeling, W. Va.
White Metal Rolling & Stamping Corp., 80 Moultrie St., Brooklyn 22, N. Y.
Whitehead Metal Products, Inc., 301 W. 10th St., New York 14, N. Y.
Whiting Corp., 15608 S. Halstead St., Harvey, Ill.
Whitman & Barnes, 2108 W. Fort St., Detroit 16, Mich.
Whitmore Oxygen Co., 430 E. South Temple St., Salt Lake City, Utah.
Whitney, W. A. Mfg. Co., 636 Race St., Rockford, Ill.
Whittaker, Clark & Daniels, Inc., 260 W. Broadway, New York 13, N. Y.
Wickwire Spencer Steel Div., The Colorado Fuel & Iron Corp., 500 5th Ave., New York 18, N. Y.
Wiese Plow Welding Co., Perry, Iowa.
Wilbur & Williams Co., Greenleaf & Leon Sts., Boston 15, Mass.
Wilcox-Crittenden & Co., Inc., 11 So. Main St., Middletown, Conn.
Wiley, John, & Sons, Inc., 440 4th Ave., New York 16, N. Y.
Will-Weld Mfg. Co., 1523 Marcy St., Omaha 2, Nebr.
Willey's Carbide Tool Co., 1340 W. Vetnon Highway, Detroit, Mich.
Williams & Co., Inc., 901 Pennsylvania Ave., N. S., Pittsburgh 12, Pa.
Williams, J. H., & Co., 400 Vulcan St., Buffalo 7, N. Y.
Willson Products, Inc., 2nd & Washington Sts., Reading, Pa.
Wilmington Fibre Specialty Co., Wilmington, Del.
Wilson Mechanical Instrument Co., Inc., New York 17, N. Y.
Wilson Welder & Metals Co., Inc., 60 E. 42nd St., New York 17, N. Y.
Wilton Tool Mfg. Co., 936 Wrightwood Ave., Chicago 14, Ill.
Winter Bros. Co., Kendrick St., Wrentham, Mass.
Wisconsin Abrasive Co., 1400 E. Park Pl., Milwaukee 11, Wisc.
Wisconsin Cuneo Press, Inc., 239 E. Chicago St., Milwaukee, Wisc.
Witt Gauge Co., Div. of National Pressure Cooker Co., 1515 Ball St., Eau Claire, Wisc.
Wittek Mfg. Co., 4305 W. 24th Pl., Chicago 23, Ill.
Wodack Elec. Tool Co., 4627 W. Huron St., Chicago 44, Ill.
Wolf-Kote Co., Inc., 820 Penn Ave., Sheboygan, Wisc.
Wolverine Gas Products, Inc., 311 Stoker Drive, Saginaw, Mich.
Wolverine Tool Co., 1480 E. Woodbridge St., Detroit 7, Mich.
Wonder Welding Spec., 518 40th St., Oakland 9, Calif.
Wood Alan Steel Co., Conshohocken, Pa.
Wood Lee, Inc., South Norwalk, Conn.
Wooldridge Aluminum Weld Products, Inc., 9 Naubuc Ave., Glastonbury, Conn.
Worth Steel Co., Claymont, Del.
Worthington Pump & Mach. Corp., Harrison, N. J.
WOW Welding Specialties Co., 149 S. Western Ave., Chicago 12, Ill.
Wright Austin Co., 315 W. Woodbridge St., Detroit 26, Mich.
Wright Hoist Div. of Amer. Chain & Cable Co., Inc., York, Pa.
Wrought Washer Mfg. Co., 2100 S. Bay St., Milwaukee 7, Wisc.
Wyandotte Chemicals Corp., Wyandotte, Mich.
Wyckoff Steel Co., Pittsburgh 30, Pa.
Wyse Laboratories, 211 S. Ludlow, Dayton, Ohio.
Wyzenbeek & Staff, Inc., 838 W. Hubbard St., Chicago 22, Ill.

Y

Yale & Towne Mfg. Co., The, Phila. Div., 4530 Tacony St., Philadelphia 24, Pa.
Yarco Distributors, 215 W. 7th St., Los Angeles 14, Calif.
Yarnall-Waring Co., Chestnut Hill, Philadelphia 18, Pa.
Yoder Co., The, 5510 Walworth Ave., Cleveland 2, Ohio.
York Engrg. Co., 3349 Ogden Ave., Chicago 23, Ill.
Young Bros. Co., 6500 Mack Ave., Detroit 7, Mich.
Youngstown Foundry & Machine Co., Youngstown, Ohio.
Youngstown Sheet & Tube Co., Stambaugh Bldg., Youngstown 1, Ohio.
Youngstown Welding & Engrg. Co., P.O. Box 6, West Side Sta., Youngstown 9, Ohio.

Z

Zeidler, E., Rockwell, Iowa.
Zucker, Myron, Engineering Co., 738 W. Seven Mile Rd., Detroit, Mich.

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